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Behaviour Change Communication: A Social Marketing Framework for Sustainable *Swachh Bharat*

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The economic cost of poor sanitation and hygiene in India is enormous. Previous sanitation interventions had limited success due to the main thrust on constructing toilets. People are willing to invest their own resources in building toilets, which also is an important factor in using them and maintaining them. Interpersonal communication is the most effective strategy in changing behaviour be it use of individual household/ community/public toilets, washing hands or segregating solid waste. Lessons, behaviour change-social marketing framework, present and desired behaviour of different stakeholder groups and capacity building requirements for making the Swachh Bharat Mission a success analysed in this study.

Introduction

Water, sanitation and hygiene have a direct and significant effect on individual health. Drinking unsafe water, improper disposal of human excreta, inadequate and inappropriate environmental sanitation and substandard hygiene practices with food and water, such as not covering drinking water containers, not washing hands before feeding infants, eating and after going to the toilet etc. are major causes of a number of killer diseases such as diarrohea in many developing countries. High infant mortality is attributed to a large extent to lack of access to toilets, open defecation, improper hygiene practices of mothers and children.

The Government of India launched the Central Rural Sanitation Programme

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(CRSP) in 1986 in order to address the issues of sanitation and hygiene and improve the quality of life of people in rural areas. Today the concept of sanitation is comprehensive, encompassing liquid and solid waste disposal, food hygiene, and personal, domestic as well as environmental hygiene. Appropriate and adequate sanitary facilities and practices help to reduce contamination of land and water, thereby reducing the incidence and prevalence of a number of diseases. Thus the concept of sanitation was, therefore, expanded to include personal hygiene, home sanitation, safe water, garbage disposal, excreta disposal and waste water disposal in the subsequent sanitation programmes of the Government of India namely "Total Sanitation Campaign" (TSC) launched in 2007 and later renamed as "Nirmal Bharat Abhiyan" (NBA) which again focused on rural India.

Swachh Bharat (Clean India) Mission (SBM)

The new sanitation campaign – "Swachh Bharat Mission" (SBM) was flagged off by the Prime Minister of India on 2nd October 2014 and will be implemented over a span of 5 years. The new Mission covers both urban and rural areas of India. The urban component – SBM (Urban) will be administered by the Ministry of Urban Development (MoUD) and the rural part – SBM (Gramin) by the Ministry of Drinking Water and Sanitation (MoDWS).

The goal

The goal of SBM (Urban) is "to transform urban India into community-driven, totally sanitised, healthy and liveable cities and towns" as per the mandate of the "National Urban Sanitation Policy". The goal of SBM (Gramin) is to achieve "Swachh Bharat" by 2019. SBM is crucial also to achieve the Millennium Development Goal (MDG)-7 namely – to ensure Environmental Sustainability and Target 10 – to "Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation". The Mission has significant bearing on health related MDGs also.

Review of Literature

The Indian sanitation context

The economic cost of Open Defecation (OD) and inadequate sanitation in India is estimated at Rs. 2.4 Trillion per year (Water & Sanitation Program, 2011, p.9). The Joint Monitoring Programme of the World Health Organisation [WHO] and United

Nations Children's Fund [UNICEF] (2014, p.52) estimated that in 2012 about 48% Indians (urban–12% and rural–48%) still practice open defecation and warned that progress towards achieving MDG targets by 2015 is not on track. Slums in urban areas pose a major sanitation and hygiene threat.

Lack of access to toilets is a major contributor to open defecation. According to census 2011 the proportion of households with no latrine was reduced from 63.6% to 53.1% during the last decade. In urban India while 81.4% households have toilets, only 32.7% are connected to piped sewerage system and 38.2% have septic tanks (Office of the Registrar General & Census Commissioner, India, 2012) and 81.4% have toilets within the premises (Directorate of Census Operations, 2013, p.272). Community Toilets (CTs) are primarily meant for use by a fixed group residing in low-income settlements/slums and are an effective alternative to prevent open defecation, in absence of access to Individual Household Latrine (IHL). Only 6% urban households in India use community toilets (Office of the Registrar General & Census Commissioner, India, 2012). Non-availability of toilets in schools also lead to open defecation and also is a major cause of girl students dropping out of schools. While 81% of schools in India have boy's toilets, only 65% are functional; while 72% of schools have girl's toilets, only 85% are functional (Mehta, 2013).

Not using the toilets constructed is a major concern in making the villages and towns Open Defecation Free (ODF). Studies from different parts of the country – Puri district (Barnard et al., 2013), Koraput (MoDWS, n.d.) in Odisha and four northern states (Coffey et al., 2014), Tamil Nadu (Sriram & Maheswari, 2013) show that the toilets constructed are not always used, even when 100% households constructed latrines in West Bengal (MoDWS, 2002, p.12) or in model *Vikas Grams* in Odisha (UNICEF, 2012, p.6). In Chennai, women and children are not using community toilets available, despite the need (IFMR Research Centre, 2011, p.1). About 30% of the community toilets in four cities of Madhya Pradesh were not in use (WACP & DUAD, n. d., p.11).

Even if people construct and uses toilets, it is essential that they wash hands with clean water and soap, after defecating. According to UNICEF hand washing with soap, particularly after contact with excreta, can reduce diarrheal diseases by over 40% and respiratory infections by 30%. In Kerala, diarrhea was reported five times higher among those who did not use soap to wash hands, compared to those

who did (The World Bank, 2002, p.15).

Segregation at source is the most important contributor to scientific and hygienic Solid Waste Management (SWM). In none of the 30 cities surveyed by Credit Rating Information Services of India Limited (CRISIL) (2014, p.102) 100% segregation of municipal waste takes place.

A number of factors influence behaviour change. Individual preferences influenced by culture and habits are the prime determinants of open defecation (Barnard et al., 2013; Patil et al., 2014). Knowledge, attitude and beliefs play a significant role in determining hygiene and sanitation practices adopted by people. The mid-term evaluation of Total Sanitation Campaign pointed out that though aware of the existence of community toilets only about 29% of the respondents used them (Agricultural Finance Corporation, 2005). Expectations are also an important factor in this regard. Coffey et al. (2014) argue that high and expensive expectations are a major deterrent to constructing an individual household latrine in India, than the poverty itself.

Realising the importance of behaviour change the strategy adopted under Total Sanitation Campaign aims to change behaviours of rural people for improved sanitation and hygiene practices and adopts a social marketing approach by providing easier access to sanitary hardware requirements at affordable prices through a wide range of technological choices (Ministry of Rural Development, 2007, p.3). As part of this strategy motivators can be engaged at the village level for demand creation and taking up behaviour change communication by giving suitable incentives to them. The strategy outlined in the Guidelines for SBM (Gramin) also focus on interpersonal communication, especially of triggering of demand and use of toilets through social and behavioural change communication and house to house interventions (Ministry of Drinking Water & Sanitation, 2014, p.2). Similarly "to bring about a behavioural change in people regarding healthy sanitation practices" is set as an important of objective in SBM (Urban) Guidelines (Ministry of Urban Development, 2014, p.2).

Behaviour Change Communication (BCC) and Social Marketing (SM)

Many expressed surprise, when the Census 2011 revealed that India has more mobiles than toilets. It indicates that the communication tools and techniques used

to market mobiles are far more effective than those marketing toilets and sanitation in India. High scorers on outcome indicators focused on mobilising users not only to change their sanitation behaviour, but also sustain the changed behaviour and those who invested their resources for toilet construction (The World Bank, 2013, p.29).

Information, Education and Communication (IEC) activities provide correct knowledge and create awareness. Behaviour Change Communication (BCC) aims at creating an enabling environment to facilitate a positive behaviour and demand creation by addressing the attitude and beliefs. Social Marketing (SM) takes care of the supply side factors so that the demand created can be effectively satisfied. (Agrawal, Aruldas & Khan, 2014).

Formative research

Communication strategies in sanitation in India so far met with limited success as they failed to understand what motivated/prevented people from using the toilets available; not washing hands with soap, especially after defecation; or throwing waste in the open. Reasons vary from individual to individual, household to household, village to village. There is a disconnect among campaign posters, wall paintings and other IEC materials displayed at the *panchayat* related to sanitation, as was pointed out by the communities in four districts of Odisha, as they were not based on socio-economic lifestyle of the rural and tribal population; specific to the context of each block (Sutra Consulting, n.d, p.8). Behavior change communication and social marketing interventions will be effective only when they are targeted at different segments (socio-economic-geographic groups) and understand their needs, wants and demand for sanitation and hygiene. Formative research provides such information.

Social marketing

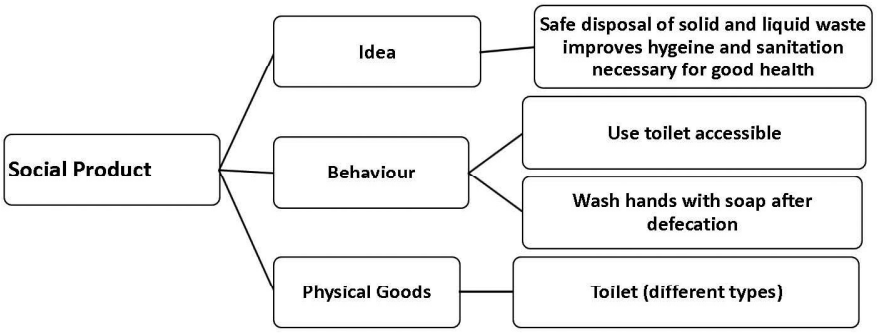
Marketing involves identifying the need, understanding the wants, creating/ assessing demand and offering a product at an affordable price (monetary and social) and at a place convenient to the target group by communicating the benefits of the product in a way that they understand and value. Social marketing is the use of marketing principles and techniques to influence a target audience to voluntarily accept, reject, modify, or abandon a behaviour for the benefit of individuals, groups, or society as whole (Kotler, Roberto & Lee, 2002). In the

context of sanitation it requires understanding of the social product and social price associated with a new sanitation and hygiene behaviour.

Product

The social product required for marketing of sanitation and waste management comprises a set of: a) behaviours, b) ideas, and c) physical goods. Social products (as proposed by author) in the context of hygiene and sanitation can be depicted as shown in the Figure 1 below.

Figure 1: Social Product



At the outset social marketing involves marketing of ideas such as: a) open defecation is associated with health hazards (diarrhea, biting by animals), social risks (sexual assault) and economic cost (treatment costs), b) latrines need not be expensive, c) toilets are not against culture and religion. This requires addressing the attitudes and beliefs by providing accurate and appropriate knowledge. Awareness about advantages of sanitation and hygiene needs to be converted into positive behaviours such as: a) constructing toilets, b) using available toilets, c) maintaining hygiene of toilets, d) wash hands with soap and clean water after defecation and before eating, e) segregate solid waste etc. by providing enabling environment by means of social/peer pressure, incentives/penalties/sanctions etc.

A variety of physical goods such as toilets, soap and water for washing hands, cleaning materials for toilets, waste bins, sewerage connections etc. are also required to change and sustain the positive behaviour over a period of time.

Research Problems and Methodology

Changing the behaviour of people with respect to: a) constructing and using toilets, b) washing hands with soap after going to toilet and before eating or feeding infants and children, and c) appropriate segregation and disposal of solid and liquid waste is a major challenge in becoming Open Defecation Free and to derive benefits of improved sanitation and hygiene practices. There is need for a comprehensive framework for bringing about behaviour change with respect to sanitation and hygiene.

The available evidence is reviewed and a situational analysis is carried out with in order to come out with a comprehensive behaviour change framework.

Situational analysis

The situational analysis looks at: 1) open defecation, 2) construction and access to toilets, 3) usage of toilets, 4) washing hands with soap, and 5) solid and liquid waste management.

1. Open defecation

About 98% of the households of 60 slums located on either side of railway track in Bengaluru are without toilets, hence use railway tracks or nearby places to defecate (Gowda, Chandrashekar, Sridhara & Hemalatha, 2013).

2. Access to toilets

Access to toilets: a) Individual Household Latrine (IHL); b) School/Aganwadi toilets; c) Community Toilets (CTs), and d) Public Toilets (PTs) is an important step in elimination of open defecation.

a. IHL: According to the data on Service Level Bench Marks of 1100 cities from 8 states collected under the Performance Assessment System (PAS) by the Center for Environmental Planning and Technology University (2014) the

average coverage of toilets among the Indian cities is only 78.9%. However, recent baseline surveys of 30 cities by MoUD (CRISIL, 2014, p.99) place the coverage of toilets at less than 20% in 11 cities and only 7 cities have 80% coverage or above.

In rural areas while 31.7% households have a latrine, only 2.2% are connected to the piped sewerage system and 14.7% have septic tanks (Office of the Registrar General & Census Commissioner, India, 2012) and only 30.7% are within the premises (Directorate of Census Operations, 2013, p.271).

b. School/Anganwadi toilets: In schools of 6 districts of Uttar Pradesh only one toilet is available for 145 students, whereas the norm is one toilet for every 40 girls or for 80 boys. In case of 48% schools there are no separate toilets for girls. About half of the toilets are not in good condition. Only 24 % of toilets are cleaned thoroughly (Srivastava, 2013). Out of 13,42,146 operational Anganwadi Centers in the country only about 48% have toilets (Press Information Bureau, 2014).

c. Community toilets (CTs): Bhopal, Gwalior, Indore and Jabalpur have 476 community toilets with 3,903 seats (Water for Asian Cities Programme [WACP] & Directorate of Urban Administration & Development [DUAD], n.d., p.9). In rural areas, all *Gram Panchayats* (GPs) are expected to have Community/Women Sanitary Complexes (CSC/WSC) under national sanitation strategies. Out of the 1,207 GPs visited during national evaluation of Total Sanitation Campaign, less than 6% have CSC/WSC. Assam, Bihar and Jharkhand have none at all. Only 1.9% rural households in India use community/public latrines. However, in Maharashtra 25% of the selected households use community toilets (Programme Evaluation Organisation, 2013, p.99-106).

d. Public toilets (PTs): Public toilets are mainly for use by people passing by markets, office complexes, bus stands, railway stations, tourist/pilgrim places etc. Availability of PTs in all metro cities is meagre given the population and area covered – 303 in Hyderabad (Gonwar, 2014); 3,712 (269 for women) in Delhi (Singh, 2014); 502 (only 220 in working condition) in Bengaluru (The Hindu, 2013); 714 in Chennai (IFMR Research Centre, 2011, p.1) and 300

(against requirement of 3,600) in Kolkata (Chowdhury, 2013) and 836 with 10,381 toilet seats (whereas 35,000 seats are required) in Mumbai (Shukla, 2013), because PTs do not get adequate attention in the City Development Plans (CDPs).

3. Usage of toilets

In order to stop open defecation, access to toilets alone is not enough. It is more important to ensure that the people use the toilets available and their cleanliness is maintained.

4. Hand washing

A study conducted in West Bengal and Tripura reported that only 49% washed their hands after using the toilet, and 38% before eating food. The percentage was even less for those who washed either before preparing (30%) or serving (26%) food (Kumar, 2008). According to the survey of the Public Health Association, about half of population in the country washes hands with soap after defecation (Walker, 2008). As per the national evaluation of TSC, only 42% used soap for washing hands (Programme Evaluation Organisation, 2013, p.133). Bhattacharya, Joon and Jaiswal (2011) observed that in two blocks of Sehore district, Madhya Pradesh only 22% and 54% households washed hands with soap after defecation and only 8% and 22% before eating.

Effective hand washing practices are evident only in 36 % schools in 6 district of Uttar Pradesh (Srivastava, 2013).

5. Solid waste management

According to the Service Level Benchmarks data compiled by Center for Environmental Planning and Technology University (2014, p.9), the mean household level coverage for solid waste management is 66%, while extent of segregation is only 15.8% in urban India. In Bengaluru it was found that the waste segregated is mixed again during transportation (Naveen & Nandini, 2004, p.6). Slum dwellers in Bengaluru throw their waste into nearby open drains expecting it to get washed away (Gowda et al., 2013). In Madhya Pradesh, 65.4% households disposed the waste in open places; while only in case of 14.7% it was collected from their homes (Population Foundation of India, 2012, p.15).

In rural areas only 14% out of 1,207 sample *gram panchayats* adopted any waste management system (Programme Evaluation Organisation, 2013, p.134).

The "rapid assessment" by Credit Rating Information Services of India Limited (CRISIL) (2014, p.5) revealed 11 out of the 30 cities do not have underground sewerage system. According to the Service Level Benchmarks data provided by 1100 cities from 8 states mean coverage of sewerage network services is only 20.9% (CEPT University, 2014, p.9)

Factors Influencing

Understanding barriers to and factors which facilitate construction, use and maintenance of toilets, washing hands and disposal of waste helps in designing appropriate communication strategies and to reap the health, economic and environmental benefits of improved sanitation and hygiene.

Barriers

Culture, habits, wrong knowledge, attitudes and beliefs, functional aspects, ineffective and inadequate Information, Education and Communication (IEC) among others are important factors which come in the way of adopting hygienic sanitation behaviors.

Construction and use of toilets

Culture and habits: About 50% of people surveyed in Tamil Nadu mentioned that defecating in open is cleaner and 11% responded that it is unhygienic to have toilets in the house (UNICEF, 2012, p. 5). Difficulty in changing cultural practices was the primary reason for not using the toilets constructed in Koraput, Odisha (MoDWS, n.d.). Social discrimination such as maltreatment of widows in Jharkhand (N.R. Management Consultants Pvt. Ltd, 2013) and caste and class distinctions also adversely affect use of toilets (Programme Evaluation Organisation, 2013, p.99-106).

Knowledge, attitude and beliefs: Only 28% of the households were aware of the CSC/WSC available in the village (Programme Evaluation Organisation,

2013, p.99-106). About 43% opined that latrine use is no way better than open defecation for child health and only about one-fourth could associate diarrhea with infectious causes (Coffey et al., 2014). In Odisha while 56% knew about adverse effects of open defecation, 36% did not think to build a toilet at home (UNICEF, 2012, p.6).

Expectations: Bangladesh eliminated open defecation as poor people built crude pit latrines using informal materials and entrepreneurs developing latrine parts from cheaper materials such as plastic pans and concrete rings for pits (Gupta & Vyas, 2014).

Functional aspects

Individual household latrine (IHL): About 53% of the IHL in Odisha did not meet the criteria of functionality leading to open defecation (Barnard et al., 2013). Other reasons for not using the available toilets include feeling of claustrophobia or reserving their use for rainy season (Agricultural Finance Corporation, 2005) and bad odour (MoDWS, 2002). Some people find alternate uses for IHL such as bathrooms in Andhra Pradesh (Latha & Anitha, 2011) and for storage (Barnard et al., 2013). Non-availability of adequate water also adversely affects use of toilets forcing people to adopt open defecation (Patil et al., 2014).

School toilets: In Andhra Pradesh they are used only by teachers and children do not have access to them (Latha & Anitha, 2011; Sriram & Maheswari, 2013).

Community toilets: CSC/WSC are defunct in many states due to poor or no maintenance (attributed to non-payment of community contribution by the *gram panchayats* and non-collection of any user charges) and water shortage. Due to this Panchayati Raj Institutions in Punjab considered that there is no need for such complexes (Programme Evaluation Organisation, 2013, p.99-106).

Common reasons cited for not using community toilets, by the household with no latrine in urban poverty pockets in Bhopal include charging cash for

each person and not liking the facility and the way it is managed (WaterAid, 2010; Biran, Jenkins, Dabrase & Bhagwat, 2011).

Public toilets : Access to usage of public toilets is limited due to choice of their location, which is guided more by exposure to advertisements and revenue, rather than need and convenience of people in Hyderabad (Deccan Chronicle, 2015) and Delhi (The World Bank, 2007). Women are deterred from using public toilets due to lack of privacy, absence of dustbins for disposal of sanitary napkins and non-availability of clean water (Jonnalagadda, 2014); inconvenient location, poor maintenance, locking at night, privatisation (IFMR Research Centre, 2011, p. 1) and are also at risk of sexual assault (Outlook India, 2004).

Type of pit: Owners of toilets with single pit limit use of toilets to only some household members or rainy season and resort to open defecation to avoid quick filling of the pits as they are not able to empty them once they were full in Bihar (WaterAid & SHARE, 2013, p.19) and inhibitions to empty the pits, due to cultural and religious norms in Odisha (Sutra Consulting, n.b., p.8).

Information, education and communication (IEC): Motivators were not in place in more than 50% *gram panchayats* and their focus had been on persuading people to construct the latrines, instead changing behaviour and creating demand for sanitation by way of making people aware of public health impact. Only about one-fifth the selected households reported that IEC activities are effective (Programme Evaluation Organisation, 2013, p.107-108). There is a need to address the prevalence of misconceptions about diseases prevented by elimination of open defecation by providing correct information. Otherwise it may lead to neglect of other aspects of environmental sanitation (Pardeshi, 2009).

Supply side factors: Rural Sanitation Marts created to improve the supply of sanitary materials for constructing toilets have not been effective. Sale of private toilets (200) was five times higher than government orders (10) for rural sanitation marts in five states (UNICEF, 2004). Less than one-third toilets constructed purchased material through rural sanitation marts (Agricultural Finance Corporation, 2005). The Planning Commission evaluation found that

only 29% *gram panchayats* and 32% households have the access to the rural sanitary marts (Programme Evaluation Organisation, 2013, p.44).

Facilitators

Convenience, benefits to women, use of interpersonal communication (IPC), cleanliness, community involvement are some of the factors which have positive influence on adoption of sanitation and hygiene behaviour by people.

Construction and use of toilets

Expectations: Convenience and comfort (Coffey, 2014); benefits to women such as sense of security, privacy, comfort and dignity (Agricultural Finance Corporation, 2005) are strong considerations for constructing individual houshold latrine.

IPC: Interpersonal communication and door-to-door visits, social mobilisation sensitive to local customs and focus on shame with the help of fines, taunting or social sanctions to punish those who continued to defecate in the open was more effective than subsidies, in improving latrine ownership and discontinuation of open defecation in Odisha (Pattanayak et al., 2009), West Bengal and Himachal Pradesh (O'Reilly & Louis, 2014). In Jharkhand sanitary messages were used in tandem with Islam religious teachings, referring *purdah* system, which is associated with dignity of women, and also employed *maulvi* who constructed toilets in four mosque, so that people use them and keep the surroundings of mosque clean, which is prescribed in Quran (N.R. Management Consultants Pvt. Ltd, 2013, p.5 & 9-10). The *maulvi*, as an ambassador, has also motivated six families to construct toilets from their own resources.

Functional aspects: Good ventilation, better quality construction, separate entrances and facilities for women, special provisions for children, locating them in easily accessible areas in Pune and Mumbai (Burra, Patel & Kerr, 2003); ensuring adequate cleaning and maintenance by levying affordable user charges (50 paise per use or a monthly card services for Rs 20 for a family of five as done by Sulabh International) urban poverty pockets of Bhopal (Biran et al., 2011) helped in inducing people to use community

toilets and reduce practice of open defecation. Integrated WSCs with sanitary napkin incinerators are widely seen in all *panchayats* and are very popular among women in Tamil Nadu. Funds for their maintenance are raised from users, on a monthly basis, Rs. 5 to 10 per household (Programme Evaluation Organisation, 2013, p.99-106).

Community/Women involvement: In Koraput 102,383 IHLs have been constructed for BPL families, involving women self-help groups for propagating communication messages through community-based theatres, disseminating messages at local festivals and door-to-door campaigns. The women self-help groups were provided with capacity building and revolving funds (MoDWS, n.d).

Pune could build over 400 community toilets with about 10,000 seats between 1999 and 2001, much more than constructed during the previous 30 years, by redefining the relationship between municipal corporation, NGOs and community (Burra et al, 2003). Entrusting the responsibility of managing community toilets to the community giving them a sense of ownership, focus on hygiene education, empowerment of women by providing social space necessary for personal and community development have been successfully used to brining in attitude and behaviour change with regard to acceptance and use of community toilets in Tiruchirapally (WaterAid, 2008) and in Madhya Pradesh (WACP & DUAD, n.d.).

Monitoring and evaluation: Seeti Bajao campaign by child health monitors was successfully used in urban Delhi in preventing open defecation (Plan, 2012). Sarola, a village in Maharashtra, effectively used the "good morning campaign", where a group practiced musical instruments at places where people went for open defecation, to deter them from open defecation and shift to toilets (Dhaktode, 2014).

School toilets: Kerala Government has decided last year not to issue "fitness certificates" to schools without toilets, in a bid to make toilets in schools a mandatory facility (News24online, 2014).

Hand washing: Availability of water and soap in the toilet result in washing hands more often in Kerala (The World Bank, 2002). *SuperAmma* a video (Biran et al., 2014) based on "emotional drivers" increased hand washing at key events in the intervention group to 37% compared to 6% in the control group. The highest improvement was observed in school aged-children (from 32 to 51%).

Solid waste management: Putting up banners to create awareness about use of alternatives for plastic bags, cash back incentives to customers for not taking plastic bags from the shops and making cloth bags available at an affordable price had been successful in changing behaviour of people in minmising use of plastic bags in different parts of Delhi and NCR region (Gupta & Somanathan, 2011). Behaviour of segregation of solid waste among households can be encouraged by providing covered bins and vehicles, reducing municipal tax (Hazra, 2013) and providing monetary incentive for the recyclable waste (Sreevatsan, 2012).

Other factors

Government support

Coffey et al. (2014) observed that people having latrines constructed with government support are likely to defecate in open two times more than people living in households whose toilets are privately constructed. They will continue open defecation if they are not ably supported by effort to change preferences and behaviour related to open defecation.

Hygiene education

School children are more amenable for behaviour change and also can influence other family and community members. However, School Sanitation and Hygiene Education (SSHE) could not result in required behaviour change due to lack of adequate emphasis on sanitation and poor quality under TSC (Programme Evaluation Organisation, 2013, p.133-34).

Ability to use resources

Allocation of the approved funds and utilisation of allocated funds for IEC under

sanitation campaigns has been poor. Under Nirmal Bharat Abhiyan (NBA) only 4% of the 15% budget allocated was spent (Jain, 2014). In Bihar only 60% of the allowed funds were approved and the expenditure was only about 14% of the approved funds from the beginning of TSC to mid 2010 (WaterAid and SHARE, 2013, p.16). Out of Rs. 4400 million available for IEC/BCC only 23.6% was spent till 2012. It was spent mainly on print materials, which have little impact (Khan, 2012, p.75). This could be attributed to weak capacities for designing innovative and target specific effective communication interventions of the IEC staff (Ganguly, 2008).

On the other hand IEC funds and program assistance under TSC has been put to good use by Himachal Pradesh in developing the strategies, systems and capacity of the officials, enabling state and district governments to manage the program and use funds effectively and attain over 80% rural sanitation coverage, an increase of above 50% in four years (Robinson, 2012, p.4).

Lessons

Above situational analysis offers a number of lessons for improving sanitation and hygiene behaviour.

1. In case of IHL, construction is guided by factors such as convenience and dignity and people are motivated.

   a) People are willing to use their own resources when they are convinced about the dangers of open defecation and benefits of use of toilets.

2. Use of toilets is (mis)guided by culture and habits, knowledge and attitude towards open defecation and use of toilets and cleaning the pits of latrines.
3. IHL constructed by government subsidy are more likely to not be used, compared to those constructed by their own funds.
4. Design (misconceptions and inhibitions about cleaning of single pits) and quality of construction also come in the way of regular use of available toilets.
5. Awareness is a necessary but not sufficient condition for people in adopting safe and hygienic practices. Hence, continuous efforts are needed

to convert knowledge into practice and to sustain new behaviour.

a. Interpersonal communication and face-to-face interactions are most effective to enable people who are aware to change their attitudes and beliefs and adopt healthy sanitation and hygiene practices such as using toilets and maintaining their cleanliness, hand washing and segregation of solid waste management. In spite of this, TSC did not use interpersonal communication in the prescribed manner.

6. In case of community toilets, location, cleanliness, security, user friendliness are the prime considerations.

   a) Women group empowerment and involvement, levying affordable user charges for maintaining cleanliness are favourable factors in making the community toilets acceptable by the community and to ensure their usage and maintenance.

   b) Community toilets also can offer space for women for interacting and exchange of useful and interesting information.

7. There is an acute shortage of public toilets in all major metro cities. Location of public toilets blocks should be guided by the needs of the people and revenues from advertisement should only be a secondary consideration.

   a) By addressing the concerns about cleanliness and security, women can be encouraged to use public toilets. They should find a place in city sanitation plans and city development plans.

8. With suitable communication coupled with incentives based on desired behaviours, one can help non-use of plastics, segregation at source in the context of solid waste management.

9. The competencies of IEC staff at district and state levels are weak, which resulted in low utilisation of funds available.

10. Monitoring in TSC was not linked to outcome indicators and focused only on toilet numbers.

Main implication of the above lessons is that intensive behaviour change communication interventions are required to bring in and sustain favourable sanitation and behaviours by creating an enabling environment. Mere IEC activities will not be adequate.

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Data Analysis and implications

The data reviewed so far indicate that there is an urgent need to motivate people in order to bring about desired social and behaviour change. This requires a social product mix, which is easily accessible and affordable to the target groups and is promoted in a way people understand and accept new products, ideas and behaviour. The following section of this paper looks at these aspects through a social marketing approach.

Also the capacity building needs of different stakeholder groups to bring about the desired social and behaviour change are addressed. The five "Ps" approach is followed.

1. Product mix

Toilets

Type: Toilets considered under *Swachh Bharat Mission* (SBM) are three types – IHLs, CTs and PTs. In addition a new type of toilets "shared toilets" – a facility is used no more than 30 persons or five families, who are known to each other and can share the cost of construction and take the onus of maintaining them (WHO & UICEF, 2013) can also be considered by SBM.

Technology: Eco-sanitation/compost toilets (where urine is not allowed to mix faeces which produces odour) have the benefits of providing compost which can replace use of expensive chemical based fertilisers. Other benefits include management and conservation of water; provide sustainable livelihood by sale of compost generated, improve fertility of soil by use of natural compost etc. (Wherever the Need, 2008). e-toilets under experimentation in Chennai cleans themselves after a specified times of use. Solar-powered bio-toilets (that make use of a special strain of bacteria to decompose human waste) and self-cleaning toilets being contemplated in Mumbai slums and other parts can be considered under *Swachh Bharat Mission.*

Multi-story design of toilets will be useful for constructing CTs and PTs to tackle space crunch in urban slums, which also provide opportunities for social interactions and exchange of useful information, especially to women.

Washing hands

Promoting washing hands with soap has been effectively leveraged by big companies like Hindustan Unilever and Dabur. Increased behaviour of using and cleaning of toilets, washing hands with soap has good potential for entrepreneurship by self-help groups and other community groups to manufacture sanitary materials, soap, toilet cleaners, which are affordable to the local community and at the same time can become a life skill.

2. Price

Social price (sexual assault, injuries, animal bites etc. especially for women), economic price (falling ill and expenditure on medical care) and environmental price (water sources contamination) to the individuals, households and communities needs to be communicated in a language and manner the common man can understand. Fines, sanctions can also be as a social price for discouraging open defecation and induce toilet use.

How the money spent on toilet construction and use, washing hands and safe disposal of solid and liquid waste can be recovered by means of social, economic and environmental benefits needs to be clearly communicated to induce behaviour change among people. In Pune "Poop Rewards" (cell phone talk time) were created for motivating people to use designated public lavatories in their area by making use of the fact that India has more mobiles than toilets (Mitra, 2015).

3. Promotion

While mass media, electronic media are useful to create awareness, interpersonal communication is most effective in changing and sustaining behaviour with respect to using toilets accessible and washing hands, segregation of waste.

The Companies Act, 2013 of India encourages companies to spend at least two percent of their average net profit in the previous three years on Corporate Social Responsibilitiy (CSR) activities (Pricewaterhouse Coopers Private Limited, 2013). The Corporate India can leverage SBM (Gramin) to fulfill their CSR. The Corporate/PSUs can address issues of sanitation through IEC, HRD or through direct targeted interventions (Ministry of Drinking Water and Sanitation, 2014).

Given below are examples of Indian Corporates using mass media to address the issues related to sanitation.

Mass media

They are more relevant at national and state level through print and electronic media. Some notable audio-visual clips on TV and social media include: a) 'Q2P', a film directed by Paromita Vohra about the silence that surrounds toilets in Mumbai city and their equality – gender, about class, about caste and most of all about space, urban development; b) "700 se 7 Kadam", which depict the hurdles a young girl faces to find a place for defecation by "Sanifresh"– a toilet cleaner brand of Dabur; c) "Gondappa Film" by Lifebuoy of Hindustan Unilever which talks about celebration of first child reaching age of 5 in Thesgora village in Madhya Pradesh in India which has the largest incidence of diarrhea in the country helping to reduce incidence of diarrhea from 36% to 5%.

"Lifebuoy" of Unilever has reached out to 58 million people since 2010 in both rural and urban India using the five levers of behaviour change namely: a) make it understood, b) make it easy, for children and mothers, c) make it desirable – such as taking pledge for *Swacch Bharat*, d) make it rewarding – highlighting the benefit, and e) make it a habit – by constant reminder. In urban India, Lifebuoy has reached out to six million people in 2013, through a direct school contact programme for the last three years, teaching the benefit of washing hands on five critical occasions every day (Hindustan Unilever, 2014).

Interpersonal communication (IPC)

In Budaun district of Uttar Pradesh, the campaign for converting dry toilets into flush toilets used IPC successfully, which in turn was crucial in elimination of transmission of wild polio virus. Another benefit of this campaign was that 2,200 manual scavengers (mostly women) were rehabilitated in less than one year (UNICEF, 2012, p.26). A TSC coordinator in Odisha asserts that IPC is the only strategy that results in sustainable behaviour change, which resulted in more than 80% usage of toilet (Sutra Consultancy, n.d., p.37).

In this context, *Swachhata Doot/Sena* – a dedicated, trained and properly incentivised sanitation work force to be engaged by *gram panchayat* or Village Water and Sanitation Committee (VWSC) as envisaged in SBM (Gramin) becomes vital. Adequate funds needs to be allocated and appropriate mechanisms to involve CBOs/NGOs/SHGs etc. need to be evolved so that such entity becomes a reality and functional and take up IPC activities, not merely remaining on paper. This cadre needs to be provided and be given incentive, as in case of *Jal Sahiya* in Jharkhand (N.R. Management Consultants Pvt. Ltd, 2013, p.2). SBM allocation for constructing toilets is 7 times higher than that under NBA, while the budget for IEC has been reduced from 15% to 8% (Jain, 2014). This is not in line with the requirement of shift in focus from constructing toilets to behaviour change.

4. Place

In case of public toilets and community toilets locations which ensures not only ease of accessibility but also ensure safety especially for women, should be the primary consideration.

5. Fifth P

Spears (2013) highlights the significance of a fifth P – *Pradhan* - in the Indian context of sanitation. *Pradhan* (or *Sarpanch*) can make a lot of difference and influence the programme implementation and its outputs and outcomes.

Capacity building

This note urges a shift from obsession with toilet construction to giving the thrust to behaviour change and adopting social marketing approach to attain sustainable *Swachh Bharat*. Such approach requires capacity building of different target groups.

Target groups

The following table 1 provides details of: a) present, b) desired knowledge, attitude and behaviour, and c) capacity building requirements – by important target group for sustainable *Swachh Bharat Mission*.

Table -1

Target group	Present/Knowledge/ Attitude/Behaviour	Desired Knowledge/ Attitude/Behaviour	Capacity Building
Individuals/ households	• Open defecation (OD) is healthy, pleasant • Toilets in house is not pure • Toilets are expensive • Not constructing individual toilets • Not using available toilets and continuing OD • Not washing hands after going to toilet • Not washing hands before eating • Cleaning of pits of toilets is harmful; against culture	• Good hygiene and sanitation stop spread of diseases • OD is harmful fraught with dangers to health, female security and dignity • Toilets in house can be maintained clean • Low technology toilets are available • Construct Individual Toilets • Use toilets available (individual, community or public) • Take responsibility of hygienic maintenance of toilets being used • Wash hands • Segregate solid waste • Adopt household level waste management practices for bio-waste • Pay user charges for community/public toilets • Clean pits	Interpersonal communication to address the attitudes and beliefs with right and appropriate behavior Regular monitoring, till the adopted practices become behaviours
Village level workers (Swachh Sena, ASHA, Jal Shiya)	Focus on motivating people to construct toilets	Household visits to monitor and ensure people use the toilets constructed and wash hands with soap	Capacity building on BCC

Target group	**Present/Knowledge/ Attitude/Behaviour**	**Desired Knowledge/ Attitude/Behaviour**	**Capacity Building**
GPs and PRI Leaders, NGOs, SHGs	• Lack of ownership of community toilets and monitoring of open defecation	• Collect User charges • Maintain toilets • Monitor open defecation • Positive sanitation and hygiene behaviour has potential for employment opportunity for making soap, sanitation materials locally and at affordable cost and generate revenues by selling compost or bio-gas generated from toilet pits	Capacity building and Advocacy
State/ district /ULB level officials	• Low priority to sanitation and hygiene in terms of fund allocation, adequate manpower and place in city development plans (CDPs) • Limited use of funds available for communication • In ability to employ target specific messages and media	• Realise the contribution of sanitation and hygiene's to city development • Provide adequate funds, build capacity of staff and prepare and implement CDPs • Full utilization of funds available for IEC/BCC • Formative research based BCC interventions • Use appropriate communication media, with a focus on Interpersonal Communication • Provide adequate provisions for CTs & PTs in CDPs	Advocacy, Capacity building on formative research, BCC tools and techniques and social marketing

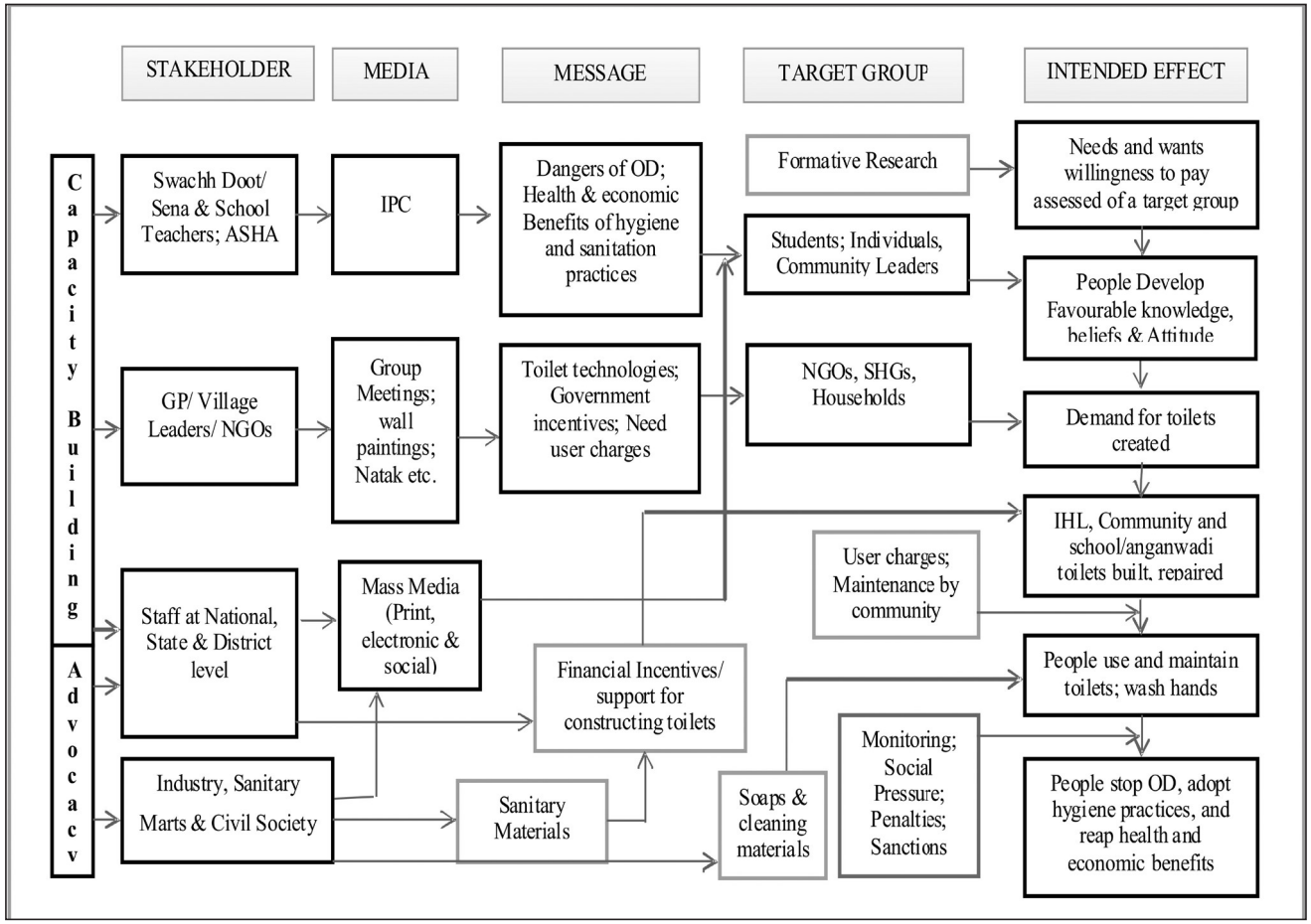
Target group	Present/Knowledge/ Attitude/Behaviour	Desired Knowledge/ Attitude/Behaviour	Capacity Building
Industry	Focus on toilet construction	• Undertake sustainable behaviour change interventions to promote health, hygiene and sanitation • Construction of toilets for women • Improve access to cheap cleaning materials to wash toilets and hands	Advocacy
Employees/ Contractors involved in Waste Management	Waste segregated at household is mixed again Mixed Waste Collected is not segregated	Practice effective waste segregation	Capacity building in BCC for effective segregation and safe handling of SWM
Trainers		Include BCC in their training programmes	Training on BCC and SM theory, practice and applications

M&E

The monitoring of SBM should rectify the weaknesses of earlier sanitation campaigns of not focusing on behavioural change and address linkage between improved sanitation and health. It should provide for mid-course corrections.

The BCC-SM Capacity Building framework (Figure 2) defines important stakeholders for capacity building. It identifies different media and messages to be used for different target groups and also spells out the intended effect of the communication interventions.

Figure-2: BCC-SM Capacity Building Framework For Sustainable *Swachh Bharat*



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Conclusion

This paper started with highlighting the need and importance of good sanitation and hygiene. Review of the available evidence and situational analysis reveal the need for adopting a comprehensive strategy in order to achieve the goal of SBM. At the end the paper has offered a BCC-SM capacity building framework for sustainable *Swacch Bharat Mission.*

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