

MYERS & CHAMBERS

39th WEDC International Conference, Kumasi, Ghana, 2016

ENSURING AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL

Partial usage of toilets: a growing problem

J. Myers & R. Chambers (UK)

BRIEFING PAPER 2354

Partial use of toilets has been a neglected topic, but is now becoming well documented in India, where much non-use of toilets is also found. Evidence from India and elsewhere is summarised and reasons for partial usage and non-usage are presented. In India toilet use is often limited to some household members, to visitors, and to night time, rains and emergencies. To achieve and sustain ODF conditions continuously, the scale and causes of partial and non-usage in India and elsewhere present an important agenda for action orientated research to understand the problems better and to find solutions.

The problem

Sustainability of open defecation free (ODF) behaviour has become a major concern in Community-Led Total Sanitation (CLTS) practice. Until recently, studies of sustainability, notably in Africa, overlooked partial usage of toilets. However, in India recent surveys have repeatedly identified non-usage or partial usage of toilets as a major problem. Some members of a household with a toilet do not use it at all, while others use it only some of the time. This can start as soon as a toilet has been constructed, or may develop over time preventing or ending ODF status. Toilet quality, maintenance and accessibility can be among the factors (Cavil et al 2015), but mind-sets, social norms and cultural preferences also play a significant role.

In India, the household hardware subsidy has limited the full and successful CLTS approach largely to favourable conditions of small and homogeneous communities in States like Himachal Pradesh and Meghalaya and in tribal areas as in Chhattisgarh. The Economic Times of India reported on 23 November 2015 that according to the National Sample Survey Office, of the 9.5 million toilets constructed in rural India in the first year (2014-5) of the Swachh Bharat (Clean India) Mission, only 46 per cent were being used (Sharma 2015). Evidence presented below suggests that many of these will only be used partially.

Drawing on academic and grey literature from India and Africa we ask how widespread and serious partial use is, why it occurs, what can be done about it, and what more needs to be known.

Scale and seriousness

Outside India, the reported scale and seriousness of partial use varies considerably. In Bangladesh, in CLTS villages, 11 per cent of households were recorded as admitting that one or more members were still defecating in the open (Hanchett et al 2011). In Ethiopia, one study (Ashebir et al 2013) found that only 37 per cent of households were using their latrines consistently. Another study in Ethiopia (Yimam et al 2014) reported that despite 87 per cent self-reported use only 61 per cent of latrines were used properly, 24 per cent had no sign of use and 14 per cent had faeces in the compound.

In India, the Sanitation Quality, Use, Access, and Trends (SQUAT) survey conducted by the Research Institute for Compassionate Economics found that 48 per cent of households with functional latrines had at least one household member who continued to defecate in the open (Coffey et al 2014), while a later study found an equivalent figure of 56 per cent (pers. comm. Sangita Vyas). In a randomised control trial (RCT) in Madhya Pradesh (Patil et al 2014), where the treatment was a CLTS-like approach combined with a household hardware subsidy to build offset pit latrines, 41 per cent of men and 38 per cent of women in the treatment group who had improved sanitation reported practising open defecation (OD) daily.

Four relevant studies have been conducted in Odisha. The percentages of those with a functioning latrine recorded as openly defecating were 27 (Jenkins et al 2014), and 24 (Dreibelbis et al 2015). One study found 37 percent of people with latrines never used them (Barnard et al 2013), while an RCT found 37 percent of latrines in the control group were not being used (Clasen et al 2014).

Partial usage, with continuing or reversion to OD, is then a serious problem, especially but not only in India. With CLTS, a few years after a community becomes ODF, the filling of pits causing partial use or non-use can be expected to increase.

Factors associated with non- or partial usage

We have found nine clusters of factors associated with non- or partial usage which are presented below. These factors may work in isolation or more likely in combinations.

Social norms

Social norms are socially accepted or agreed values, beliefs, attitudes and behaviours – reflecting what a person considers right and expected behaviour. OD can only be overcome by transforming social norms: everyone must want a toilet, want to use and use it all the time, and expect others to want the same and do the same. This is the vital core of the collective behaviour change induced by a successful CLTS process.

A study in North India found that OD was rarely seen as socially unacceptable (Coffey et al 2015). Norms about purity and pollution of the body and ideas about private spaces support the practice of OD distant from the dwelling, even when there is access to a latrine. Many see OD as a wholesome activity promoting purity, and good for health (Ibid). Conversely, toilets near the dwelling are seen as polluting.

Even when norms change collectively, deviations may be accepted – for instance on the part of children, the elderly or those with disabilities. OD can also be deemed more acceptable in certain circumstances, for example when traveling or when away from the home. In Bangladesh, elderly people who continue OD when others have stopped are not severely criticised (Hanchett et al 2011). In India and elsewhere, these norms and tolerances present widespread challenges to the achievement of fully ODF conditions.

Taboos, beliefs and prohibitions

Examples of taboos, beliefs and prohibitions include:

- In the far west of Nepal, women have been barred for using toilets when they are menstruating (pers. comm White).
- In Bangladesh a man explained that he rarely used his latrine to avoid the embarrassment for himself and his daughter-in-law as she had to clean her menstrual blood (Hanchett et al 2011).
- In Ethiopia, a study found that it is taboo for men and women to share a latrine and the sight of faeces is unacceptable. Men have been recorded continuing to defecate in the open to avoid this (Ashebir et al 2013).
- In Nigeria, a common belief that warm air coming up from the pit makes women more vulnerable to diseases has been given as a possible explanation why women were less likely to use toilets than men (Abramovsky et al 2015). In Idoma communities it is taboo to defecate in a superstructure. Furthermore husbands have refused to use the same latrines as their wives and daughters (WaterAid 2009).
- In Eastern Zambia, traditional taboos make it difficult for male heads of household to share latrines with other family members if there is a high risk of being seen (Thys et al 2015).

Awareness of taboos, beliefs and prohibitions can inform behaviour change communication, post-triggering and post-ODF activities. Ways to challenging menstrual taboos have been discussed previously (Roose et al 2015).

Preferences and convenience

In India, OD is often preferred and considered healthier. The SQUAT survey found that of those with a latrine who continued to defecate in the open, 74 per cent found it pleasurable, comfortable or convenient (Coffey et al 2014). Lack of water for anal cleansing and post defecation ritual bathing next to the toilet has been given as a reason for OD (Routray et al 2015).

Those less able: poverty, age and disability

Those less able to construct and maintain toilets may, unless helped, continue or lapse into, OD (Cavill et al forthcoming). Young children's faeces are often considered relatively harmless and not disposed of hygienically, an aspect of partial usage that has until recently been largely overlooked (WSP 2015). Elderly people's reluctance to abandon the habit of OD is sometimes tolerated. Disabled people may be unable to use toilets because of problems of access (Wilbur and Jones 2014).

Gender dimensions

Women have many reasons for using toilets which do not apply to men. In South Asia, toilets remove the physical and mental risk and stress of having to go before dawn and the loss of sleep entailed, or of having to hold out until dark. The SQUAT survey (Coffey et al 2014) found that in households with toilets, men were less likely to use them. Men defecate in the open more than women for many reasons, including:

- Men have fewer household and childcare commitments in or near the dwelling.
- During the day men travel further afield.
- It is less shameful for men to be seen, and they are not similarly vulnerable to sexual harassment or humiliation by voyeurs.
- Men can rationalise their OD as enhancing the dignity of women by allowing them unrestricted access to a toilet, and with the view that toilets are for women, children, the elderly, the sick and the disabled.

In South Asia and in Muslim countries where women are restricted in their movements, they can value going together to defecate in the open as a social occasion when they can meet and talk. A study in Odisha (Routray et al 2015) found that women said OD gave them an opportunity to leave the home and have time away from chores and responsibilities. Some also reported that this was a time they were able to release stress by sharing family problems. For daughters-in-law it was their only chance to leave the household.

Pressure on use

Queuing is expected more with shared than individual household toilets. However, in large households one toilet may not be enough for all members. A study in Bihar found that 19 per cent of households had ten or more people using one toilet (Water, Sanitation and Hygiene Institute 2015). Men may choose OD to relieve queuing or pressure on a toilet in the morning. Though anecdotal, both authors have heard this explanation given in villages in different parts of India by men who have continued to practice OD.

Full pits and fear of pits filling up

Following the spread of CLTS in many countries, the number of pits nearly full or full will increase. When pits are nearly full the options are: digging a new pit, emptying, using it only partially, or abandoning it and reverting to OD. Digging a new pit can be problematical where there is little space or the soil type or topography make it difficult or costly. In Zambia pits are generally abandoned when full and a new latrine constructed. However, those with small compounds are reported to be running out of space (SNV Zambia 2014). Cost of emptying is another factor: in Bangladesh, the availability and perceived affordability of pit emptying services is a key issue in sustaining latrine usage (Hanchett et al 2011) and in rural Laos, households unable to afford emptying costs have reverted to OD (Opel and Cheuasongkham 2015).

In India, a major factor is the desire to postpone the unpleasant task of emptying. In Odisha, Routray et al 2015 found a fear that single three ringed pits would quickly fill up if used all the time. People often want large pits, typically septic tanks, that will last a lifetime (Coffey et al 2015). Caste plays a part here. Dealing with faeces is considered the work of *Bhangis*, the very lowest castes. Manual scavenging is illegal but still practised. The very presence of the lowest castes for emptying a toilet may itself be regarded as polluting, and they themselves deeply resent the way they are regarded and treated. Other castes may fear that the cost for inducing them to empty their pits will be very high (Gupta et al; forthcoming).

Pits becoming full or wanting to postpone their filling, can deter people from using toilets or using them fully. They then reserve them increasingly for dire need such as sickness, night time, heavy rain, and for those who are elderly, disabled, children and visitors. Partial usage can be expected to become more marked as pits fill. For CLTS and for rural sanitation programmes generally, pit filling and emptying are a frontier of growing importance for sustainability.

Dirt, smell, disgust, fears and cleansing

Dirty toilets are unpleasant to clean and deter use. Bad smell also presents an overlooked barrier to latrine adoption (Rheinländer et al 2013). In Northwest Ethiopia, households with hygienic latrines have been found over four times more likely to use them (Yimam et al 2014). High percentages of smelly and dirty toilets have been found in studies in Bangladesh (Hanchett et al 2011), Tanzania (World Bank 2009), Myanmar (UNICEF Myanmar 2011) and Meghalaya, India (O'Connell 2014).

Design, construction and ownership

Small superstructures, darkness, public locations, lack of roofs for protection against rain and so on are reported deterrents. A study in Nigeria found the type of toilet affected usage rates, with septic tanks most likely to be used, and pit latrines without a slab the least (Abramovsky et al 2015). In Tanzania, it was more likely that all members of a household would use an Improved Ventilated Latrine (VIP) (98 per cent) than an unimproved one (90 per cent) (Kema et al 2012). Study after study (Barnard et al 2013; Routray et al 2015), has found lack of privacy afforded by a toilet a factor in reversion to OD.

With CLTS, households often choose options at the lower end of the sanitation ladder. Plan International's ODF sustainability study in four African countries found poor quality, failing latrines and inability to maintain them and repair damage were reasons for reversion back to OD (Tyndale-Biscoe et al 2013).

Most important of all is a sense of ownership. Those who dig their own pits and build their own latrines, as in CLTS practice, regard them as their own, and are far more likely to use, maintain and repair them.

Agenda for policy, practice and research

Taking all this into account three sets of implications for action stand out:

1. Provoke and foster awareness and change in social norms: In countries without universal hardware subsidies, well implemented CLTS can change social norms quite dramatically. In India the hardware subsidy programme and deeply embedded social norms are among the factors that impede this on any scale. Transforming norms from non- and partial usage to total usage is a daunting frontier. A wide repertoire of actions includes multidimensional campaigns - total, universal, inclusive, non-partisan and participatory - with champions in all organisations, of all faiths, of all ages including children, and at all levels. To the many CLTS triggering methods already in use might be added how OD through faecally-transmitted infections causes undernutrition and stunting and impairs the cognitive and physical development of children. Brutally direct banner slogans could be 'Who is stunting your child today?' and 'Whose children are you stunting today?' The key, which the Indian Government is initiating, is rapid action learning to know, evolve and spread whatever is found to work.

2. Provide technical knowledge: CLTS focuses on behaviour change, with less attention to technical knowledge about toilet construction and maintenance. Appropriate technology varies by physical and social context. In four African countries, slippage was affected by lack of advice or knowledge about how to build or maintain good quality and durable latrines (Tyndale-Biscoe et al 2013). Expensive options may profit entrepreneurs but discourage total sanitation because poorer people cannot afford them. Knowledge of substructure requirements is critical for the supervision of masons: once covered over, it can be hard or impossible to inspect. Where masons construct, householders and village committees need to know how to supervise and what to insist on. Superstructures are best left to households themselves.

3. Explore pit management options: In many rural areas there is widespread ignorance and lack of hygienic options for emptying toilets when they are full. In the CLTS tradition, communities should be facilitated to discuss what will happen when pit latrines fill up. Should new pits be dug or should they be emptied and contents be disposed of safely? And what support may be needed to offer an adequate user-friendly service? One option is covering pits and digging new ones. Another is manually-operated pumps, which raise the problem of what to do with the sludge once it is out the pit. Another, promising solution, is tiger worms which compost fresh human faeces while the effluent infiltrates the soil below. The vermicompost generated at the top of the system is a dry odourless humus, easy and safe to empty. The composting reduces the volume of pit contents and delays filling.

Consideration of caste is important here. When discussing pit management it is important that those who deal with shit are not treated like shit.

Partial usage is a relatively new area about which much more needs to be known. Research and action research priorities will vary by context: conditions elsewhere in Asia and in Africa will differ from those in India. Some questions that stand out at this stage are:

Research

- How can reliable statistics be generated for partial toilet usage?
- How widespread and serious is partial usage in countries other than India?
- What regional, national and local variations, factors and problems affect usage?
- What formative research is needed to understand relevant social norms?

Action research

- How is it best to provoke and encourage transformation of taboos and social norms?
- How can toilet cleaning and pit emptying be ensured? What support do service providers need?
- How to break caste based exclusion and violence linked to sanitation practices and FSM?
- How is it best to work with and support Natural Leaders and others concerning norms and usage?
- How best to develop pit management and emptying services in rural areas?
- What can work effectively and at scale to overcome India's specific problems?

Conclusions

This is an early stage in exploring partial toilet usage. We have summarised and categorised what we have been able to learn, suggested actions and proposed a research agenda. Nothing here is cast in stone. We invite comment, criticism, correction and further insights to help us collectively learn how to confront these increasingly burning issues more effectively.

Acknowledgements

For comments and contributions we would like to thank Sanchita Ghosh, Naomi Vernon, Petra Bongartz, Sangita Vyas and Claire Furlong.

References

- Abramovsky, L., Augsburg, B. and Oteiza, F. (2015) *Sustainable Total Sanitation – Nigeria Baseline Report*, <http://goo.gl/rVRgub>
- Ashebir, Y., Sharma, H.R., Alemu, A. and Kebede, G. (2013) 'Latrine Use among Rural Households in Northern Ethiopia: A Case Study in Hawzien District, Tigray', *International Journal of Environmental Studies*, 70.4: 629-636
- Barnard, S., Routray, P., Majorin, F., Peletz, R., Boisson, S., Sinha, A. and Classen, T. (2013) 'Impact of Indian Total Sanitation Campaign on Latrine Coverage and Use: A Cross-Sectional Study in Orissa Three Years following Programme Implementation', *PLoS ONE*, 8.8
- Cavill, S. with Chambers, R. and Vernon, N. (2015) 'Sustainability and CLTS: Taking Stock', *Frontiers of CLTS: Innovations and Insights* Issue 4, Brighton: IDS
- Cavill, S., Roose, S., Stephen, C. and Wilbur J. (forthcoming, 2016) 'Putting the hardest to reach at the heart of the SDGs' in CLTS Knowledge Hub edited book on CLTS and Sustainability.
- Clasen, T., Boisson, S., Routray, P., Torondel, B., Bell, M., Cumming, O., Ensink, J., Freeman, M., Jenkins, M., Odajiri, M., Ray, S., Sinha, A., Suar, M. and Schmidt, W-P (2014) 'Effectiveness of a Rural Sanitation Programme on Diarrhoea, Social-Transmitted Helminth Infection, and Child Malnutrition in Odisha, India: A Cluster-Randomised Trial', *The Lancet Global Health*, 2.11: 645-653
- Coffey, D., Gupta, A., Hathi, P., Khurana, N., Spears, D., Srivastav, N. and Vyas, S. (2014) *Revealed Preference for Open Defecation: Evidence from a New Survey in Rural North India*, SQUAT Working Paper 1, RICE Institute.
- Coffey, D., Gupta, A., Payal, H., Spears, D., Srivastav, N. and Vyas, S. (2015) *Culture and Health Transition: Understanding Sanitation Behaviour in Rural North India*, IGC Working Paper.
- Dreibelbis, R., Jenkins, M., Chase, R.P., Torondel, B., Routray, P., Boisson, S. Clasen, T. and Freeman, M. (2015) 'Development of A Multi-Dimensional Scale to Assess Attitudinal Determinants of Sanitation Uptake and Use', *Environmental Science and Technology*, 49.22: 13613-21

- Gupta, A., Coffey D. and Spears D. (forthcoming, 2016) 'Purity, pollution, and untouchability: challenges affecting the adoption, use and sustainability of sanitation programmes in rural India' in CLTS Knowledge Hub edited book on CLTS and Sustainability.
- Hanchett, S., Krieger, L., Kahn, M.H., Kullmann, C. and Ahmed, R. (2011) *Long-Term Sustainability of Improved Sanitation in Rural Bangladesh*, Washington, DC: World Bank.
- Jenkins, M.W., Freeman, M.C. and Routray, P. (2014) 'Measuring the Safety of Excreta Disposal Behavior in India with the New Safe San Index: Reliability, Validity and Utility', *International Journal of Environmental Research and Public Health*, 11.8: 8319-46
- Kema, K., Semali, I., Mkuwa, S., Kagonji, I., Temu, F., Ilako, F. and Mkuye M. (2012) 'Factors Affecting the Utilisation of Improved Ventilated Latrines Among Communities in Mtwara Rural District, Tanzania', *Pan African Medical Journal*, 13.4: 1-5
- Patil, S., Arnold, B., Salvatore, A., Briceno, B., Ganguly, S., Colford, J., Gertler, P. (2014) 'The Effect of India's Total Sanitation Campaign on Defecation Behaviours and Child Health in Rural Madhya Pradesh: A Cluster Randomised Controlled Trial', *PLoS Medicine*, 11.8
- Opel, A. and Cheuasongkham, P. (2015) Faecal Sludge Management Services in Rural Laos: Critical Gaps and Important Ways Forward, Presentation 19/03/2015 International Faecal Sludge Management Conference.
- O'Connell, K. (2014) *What Influences Open Defecation and Latrine Ownership in Rural Households?: Findings from a Global Review*, Water and Sanitation Program Working Paper, Washington DC: World Bank.
- Rheinländer, T., Keraita, B., Konradson, F., Samuelsen, H. and Dalsgaard, A. (2013) 'Smell: An Overlooked Factor in Sanitation Promotion', *Waterlines*, 32.2: 106-112
- Roose, S., Rankin, T. and Cavill, S. (2015) 'Breaking the Next Taboo: Menstrual Hygiene within CLTS', *Frontiers of CLTS: Innovations and Insights* Issue 6, Brighton: IDS.
- Routray, P., Wolf-Peter, S., Boisson, S., Clasen, T. and Jenkins, M., (2015) 'Socio-Cultural and Behavioural Factors Constraining Latrine Adoption in Rural Coastal Odisha: An Exploratory Qualitative Study', *BioMed Central Public Health* 15
- Sharma, N. (2015) Swachh Bharat Abhiyan: Survey reveals not even half the toilets built being used; government withheld findings', *Economic Times of India*, 23 November, <http://goo.gl/5FaOME>
- SNV Zambia (2014) *Zambia Country Baseline Report: SSH4A Results Programme*, unpublished
- Thys, S., Mwape, K.E., Lefèvre, P., Dorny, P., Marcotty, T., Phiri, A.M., Phiri, I. and Gabriel, S. (2015) 'Why Latrines Are Not Used: Communities' Perceptions and Practices Regarding Latrines in a *Taenia solium* Endemic Rural Area in Eastern Zambia', *PLOS Neglected Tropical Diseases*, 9.3
- Tyndale-Biscoe, P., Bond, M. and Kidd, R. (2013) ODF Sustainability Study, FH Designs and Plan International, <http://goo.gl/RjT1xz>
- UNICEF Myanmar (2011) *Knowledge, Attitude and Practice Study into Water, Sanitation and Hygiene in 24 Townships in Myanmar*, <http://goo.gl/YACCC0>
- Vyas, S. (2015) Research Institute for Compassionate Economics. Personal communication [email December 2015]
- WaterAid (2009) Towards Total Sanitation: Socio-cultural barriers and triggers to total sanitation in West Africa Water, WaterAid, <http://goo.gl/hXtprC>
- Water, Sanitation and Hygiene Institute (2015) *Faecal Sludge Management: A Landscape Study of Practices, Challenges, and Opportunities*, <http://goo.gl/9RtazA>
- White, P., (2015) Project Coordinator and Gender, Social Inclusion and HRBA Advisor for RWSSP-WN, FCG International, Helsinki, Finland. Personal communication [email 2015]
- Wilbur, J. and Jones, H. (2014) 'Disability: Making CLTS Fully Inclusive', *Frontiers of CLTS: Innovations and Insights* Issue 3, Brighton: IDS.
- World Bank (2009) *Tanzania - Market Research Assessment in Rural Tanzania for New Approaches to Stimulate and Scale Up Sanitation Demand and Supply*, Water and Sanitation Program. Washington DC: World Bank.
- WSP (2015) Management of Child Faeces: Current Disposal Practices, Water and Sanitation Program Research Brief, Washington DC: World Bank.

Yimam, Y.T., Gelaye, K.A. and Chercos, D.H. (2014) 'Latrine Utilization and Associated Factors Among People Living in Rural Areas of Denbia District, Northwest Ethiopia, 2013, A Cross-Sectional Study', *Pan African Medical Journal*, 18.334

Contact details

Both authors work for the CLTS Knowledge Hub at the Institute of Development Studies.

Robert Chambers
Institute of Development Studies
r.chambers@ids.ac.uk

Jamie Myers
Institute of Development Studies
j.myers2@ids.ac.uk
