Validity of Sanitation Interventions: What Influences Decision Making and Latrine Adoption in Rural Ghana and Rural India

18

Michaela R. Droog, mdroog@ucsd.edu
Global Health Program
University of California, San Diego

Abstract:

In rural communities, lack of hygiene and sanitation remains a large issue due to various reasons leading to serious illnesses and numerous fatalities. Observing rural areas in Ghana and India brings attention to the more complex factors socially and structurally that could be overlooked when focusing on a whole country. By focusing on smaller communities with two large countries, it allows for comparing and contrasting existing sanitation programs to see if issues overlap between countries worldwide and how specific interventions need to be within certain countries. The issue that persists within interventions and efforts to promote sanitation is the lack of consideration of the cultural and social differences within each rural community. Noticing the underlying factors contributing to decision-making within these rural communities is important because they show how each country has unique factors that must be considered when addressing a situation. It teaches us that in order for success we must understand social and cultural customs and that we must also work with communities and focus on community involvement in order to successfully reduce open defecation through building latrines.

Problem:

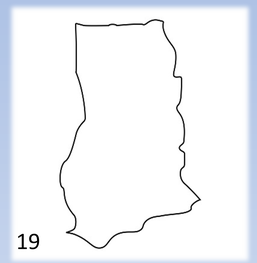
- "Globally, 432,000 diarrheal deaths occur annually and the cases appear within communities suffering from inadequate sanitation" (15)
- Worldwide, 673 million people, out of the 2 billion who lack access to basic sanitation, still practice open defecation as a way of relieving themselves (15)
- Open defecation is that it is not hygienic, pollutes the surrounding environment and contaminates water supplies (17)

Context: Ghana and India are very different places but share many similarities regarding sanitation and hygiene. Choosing these two distinctive countries allows for the closer observation of whether location, culture, and social identity also play a role in interventions. Specifically comparing rural communities will confirm or deny whether income, poverty, resource availability, etc. play a role in establishing latrine infrastructure.

India:
- population: 1.3 billion, 66% rural (5)
- 71.5% unimproved sanitation facilities (5)

Ghana:
- population: 29 million, 44% rural (4)
- 91.4% unimproved sanitation facilities (4)

20



19

External factors contributing to preferred open defecation/ lack of latrine adoption	India	Ghana
Culture/Caste issues	• Caste systems and spiritual beliefs influence the presence of latrines in households and use of latrines. (12)	• Shared attitudes and culture towards cleanliness and neatness. (8)
Gender roles/norms	• Open defecation was used by females to escape their domestic duties (12). • Men were the decision-makers on whether or not to implement household latrines. (10, 13) • Women in some communities want latrines for safety, hygiene and comfortability (10, 16)	• Males are more likely to use improved sanitation facilities. (2) • Women and men can not use sanitation facilities at the same time leading to long wait times and preference for open defecation. (9) • Women want latrines due to comfortability, security and safety (9)
Socioeconomic status as a deterrent	• Lack of wealth and resources connected to lack of access to sanitation facilities (3, 7)	• The poorer the socioeconomic status, the less likely for improved sanitation (1, 2, 9)
Sustainability of interventions	• Some latrines are inequitable to all, latrines are dirty and incomplete leading to failure of the intervention (3, 10)	• Decisions on latrine adoption was actually dependent on how accessible and convenient they were (9)
Social values	• Women openly-defecated together so they could gossip and interact. (13) • Communities social influence and beliefs are important to successful latrine adaption • Generational habits (16)	• Social norms of cleanliness and purity were actors present in sanitation decision making (8)
Education and awareness	• Social networks played an important role of spreading awareness and promoting latrine use. (14) • Households with educated females correlated with higher latrine use and adoption. (6, 11)	• A study done in rural communities with poor education resulted in lack of use of improved sanitation facilities, more research needed (2, 7, 9) • More educated households had safer water and better sanitation facilities (1)

Community- based efforts versus government implementation:

Results show that the government implemented latrines either failed or did not exist within the rural areas of each country due to poor infrastructure and lack of funding. Due to incomplete, poor quality or lack of latrines most countries continued with open defecation. Though the government implementations failed or did not exist, both countries responded well to community based interventions. These programs elected community leaders to run the project or attempted to shift community perspective, focusing on communities working together in the process of better sanitation and hygiene.

Analysis and Conclusion:

Interventions must take into account the various external factors that effect decision making and latrine adoption. Government implementation, poor infrastructure and implementation without considering the differences in a communities sociocultural beliefs and lifestyles will fail. All communities and sources analyzed showed that each country and individual rural communities had differing beliefs, lifestyles, resources and social values that effected whether they practiced open defecation or used improved sanitation facilities. What my research indicated is that community approaches are successful because they incorporated a individualistic approach to each community in order to implement sanitation facilities. Implementing an intervention with no background information on the community or their values is doomed for failure because it does not guarantee the communities will use the facilities. Overall, interventions need to shift perspective and understand the distinct influences of decision making that shifts between communities within a country and how decision making also differs depending on the country.

References:

1. Adams, Ellis Adjei, Godfred O. Boateng, and Jonathan A. Amoyaw. "Socioeconomic and demographic predictors of potable water and sanitation access in Ghana." *Social Indicators Research* 126.2 (2016): 673-687.2. Akpakli, D. E., Manyeh, A. K., Akpakli, J. K., Kukula, V., & Gyapong, M. (2018). Determinants of access to improved sanitation facilities in rural districts of southern Ghana: evidence from Dodowa Health and Demographic Surveillance Site. *BMC research notes*, *11*(1), 473. 3. Banda, Kalyan, et al. "Water handling, sanitation and defecation practices in rural southern India: a knowledge, attitudes and practices study." Transactions of the Royal Society of Tropical Medicine and Hygiene 101 (2007): 1124-1130. 4. CIA. "The World Factbook: Ghana." Central Intelligence Agency, Central Intelligence Agency, 1 Feb. 2018, www.cia.gov/library/publications/the-world-factbook/geos/gh.html 5. CIA. "The World Factbook: India." Central Intelligence Agency, Central Intelligence Agency, 1 Feb. 2018, www.cia.gov/library/publications/the-world-factbook/geos/in.html. 6.Coffey, D., Spears, D., & Vyas, S. (2017). Switching to sanitation: understanding latrine adoption in a representative panel of rural Indian households. *Social Science & Medicine*, *188*, 41-50. 7. Jha, P. K. "Health and social benefits from improving community hygiene and sanitation: an Indian experience." International journal of environmental health research 13.sup1 (2003): S133-S140. 8. Jenkins, M. W., & Scott, B. (2007). Behavioral indicators of household decision-making and demand for sanitation and potential gains from social marketing in Ghana. *Social science & medicine*, *64*(12), 2427-2442. 9. Keraita, B., Jensen, P. K. M., Konradsen, F., Akple, M., & Rheinländer, T. (2013). Accelerating uptake of household latrines in rural communities in the Volta region of Ghana. *Journal of water, sanitation and hygiene for development*, *3*(1), 26-34.10. Khanna, Tina, and Madhumita Das. "Why gender matters in the solution towards safe sanitation? Reflections from rural India." *Global public health* 11.10 (2016): 1185-1201.11. O'Reilly, K., Dhanju, R., & Goel, A. (2017). Exploring "the remote" and "the rural": Open defecation and latrine use in Uttarakhand, India. *World Development*, *93*, 193-205. 12. Routray, P., Schmidt, W. P., Boisson, S., Clasen, T., & Jenkins, M. W. (2015). Socio-cultural and behavioural factors constraining latrine adoption in rural coastal Odisha: an exploratory qualitative study. *BMC public health*, *15*(1), 880. 13. Routray, Parimita, et al. "Women's role in sanitation decision making in rural coastal Odisha, India." PloS one 12.5 (2017) 14. Shakya, Holly B., Nicholas A. Christakis, and James H. Fowler. "Association between social network communities and health behavior: an observational sociocentric network study of latrine ownership in rural India." *American Journal of Public Health* 104.5 (2014): 930-937. 15 "Sanitation." *World Health Organization*, World Health Organization, 2019, www.who.int/news-room/fact-sheets/detail/sanitation. 16Sinha, A., Nagel, C. L., Schmidt, W. P., Torondel, B., Boisson, S., Routray, P., & Clasen, T. F. (2017). Assessing patterns and determinants of latrine use in rural settings: a longitudinal study in Odisha, India. *International journal of hygiene and environmental health*, *220*(5), 906-915.17. Sorensen, J. P. R., et al. "Are Sanitation Interventions a Threat to Drinking Water Supplies in Rural India? An Application of Tryptophan-like Fluorescence." Water Research, vol. 88, Jan. 2016, pp. 923–32. ScienceDirect, doi:10.1016/j.watres.2015.11.006. 18. Toilet Cartoon photos, royalty-free images, graphics, vectors & videos. (n.d.). Retrieved from https://stock.adobe.com/search?k=toilet cartoon 19. ollegN. (n.d.). map of Ghana - outline. Silhouette of Ghana map vector illustration. Retrieved from https://www.istockphoto.com/vector/map-of-ghana-outline-silhouette-of-ghana-map-vector-illustration-gm1087671710-291816419 20. india-outline-map.jpg (1500×1612): India map, Map, Political map. (n.d.). Retrieved from https://in.pinterest.com/pin/2899199133061032O/