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The social and political construction of latrines in rural Ethiopia

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ABSTRACT

This study seeks to understand the complexity of efforts to improve sanitation practices in the infrastructure-restricted and environmentally vulnerable setting of two rural districts of the Wolaita Zone, South Ethiopia. It seeks to simultaneously address micro-level behavioural and social determinants of sanitation, on the one hand, and political and environmental drivers, on the other hand. We draw on analysis of secondary information and own survey comprising structured interviews and direct observations in 368 households in 11 villages as well as 20 semi-structured interviews with health workers and village leaders. We consecutively examine different sanitation drivers and then attempt to paint a complex picture of sanitation situation in a given context. We found high latrine coverage and use but low functional quality of latrines implying uncertain benefits to human health. We attribute this pattern to relationships between the political construction of latrines (political commitment to sanitation characterized by the command-and-control nature of Ethiopian governance), socially constructed perceptions of symbolic risks and benefits of sanitation, and neglect of sanitation technologies within an environmental context.

1. Introduction

Unhygienic defecation practices significantly increase the risk of diarrhoeal and other infectious diseases. Interwoven with water and hygiene, sanitation represents a major cause of disease around the world (Clasen et al., 2014; Wolf et al., 2014). In 2015, an estimated 2.4 billion of people globally still lacked access to improved toilets and 946 million of them defecated in the open. In Sub-Saharan Africa, the number of people without access to improved sanitation has increased since 1990 due to slow improvements in sanitation coverage and population growth (UNICEF/WHO, 2015). Recent systematic reviews uncovered that sanitation interventions had only a modest impact on latrine coverage and use (Garn et al., 2017) and acknowledged a high dependence of sanitation on diverse influencers that are often context-specific (Novotný et al., 2018a). In order to achieve the Sustainable Development Goal of ensuring all humans have access to adequate sanitation by 2030 (UN, 2015), a further contextually-sensitive understanding of the factors underlying sanitation patterns is necessary.

This article presents a case study from South Ethiopia which seeks to understand the complexities behind efforts to induce and sustain latrine use in an environment characterized by infrastructural restrictions, limited accessibility, and high environmental and socioeconomic vulnerability. We aim to simultaneously address behavioural and social determinants of sanitation as well as political and environmental drivers. In this way, we reflect on two distinct yet separate perspectives that resonate in recent sanitation research. The first one includes the traditional focus of many public and environmental health researchers on the motivators that drive behavioural changes in sanitation at micro-scale. The second perspective, more characteristic for geographers or anthropologists, examines wider social and political processes and the structural constraints behind 'sanitation poverty' through political-economy and political-ecology approaches and arguments. Our effort to reflect on both these perspectives is explorative in the sense that we consecutively examine different types of determinants influencing observed sanitation pattern and then synthesize the findings. The Integrated Behavioural Model for Water, Sanitation, and Hygiene (IBM-WASH) developed by Dreibelbis et al. (2013), which comprehensively acknowledges multiple dimensions and scales of sanitation drivers, was considered to organize the analytical part of this study. The analysis draws on both secondary information used to outline national and regional context of sanitation politics and own primary data from 11 villages within two districts of the Wolaita Zone, Southern Ethiopia. We collected this data in 2015 through structured interviews in households (N = 368) and semi-structured interviews with health workers and village leaders (N = 20).

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2. Conceptual background

It is acknowledged that successful sanitation change doesn't solely depend on the supply of sanitation infrastructure but requires changes to the political, economic, social, cultural, and environmental underpinnings of sanitation, and a systemic behaviour change at individual, household, and community levels. Previous research identified a number of possible motivators for the adoption of toilets (e.g. prestige and modern lifestyle, privacy, security, or comfort), and various influencers of sanitation outcomes (e.g. wealth, education, occupation, gender relations, physical environment, etc.). This research emphasized various mechanisms of sanitation change operating on different scales such as individual-level psychological processes (Jenkins and Curtis, 2005; Jenkins and Scott, 2007; Gross and Günther, 2014), social norms and social networks that frame individual-level sanitation behaviour to a community-level fabric (Shakya et al., 2015), socio-cultural underpinnings of sanitation (Jewitt, 2011; Coffey et al., 2014; Routray et al., 2015), institutional involvement (Admassie et al., 2009), but also inequalities in general education (Novotný et al., 2018b) or various social and political power relations influencing unequal access to resources and services (O'Reilly and Louis 2014; Bardosh, 2015; O'Reilly et al., 2017).

Given a larger number of potentially important determinants to be considered by sanitation practitioners and researchers, conceptual models play an important role in "taming the complexity" and systematically organizing these influencers (Novotný et al., 2018a, p. 131). A useful synthesis of the behavioural and psychological theories of successful WASH interventions is provided in Mosler (2012) who presents a general behaviour change model, which classifies psychological determinants into five blocks; Risks, Attitudes, Norms, Abilities, and Self-regulation (RANAS). The RANAS model is useful on a practical level as it recognizes that factors in the particular blocks are amenable to different types of interventions and, accordingly, proposes an analytical procedure to design purposeful behavioural WASH interventions. However, the focus of behaviour change models ignores or only indirectly reflects broader contextual influences. This fact was accentuated by O'Reilly and Louis (2014) who provide a simple yet useful conceptualization of conditions required for successful toilet adoption referred to as the 'toilet tripod'. Their conceptualization stresses the importance of three analytical categories; the multi-scalar political will, proximate social pressure, and political ecology factors. It diverges from earlier frameworks concerned primarily with micro-level behavioural determinants and can be considered as a part of critical sanitation scholarship focusing on wider structural constraints such as power-relations, socio-spatial inequalities, or political ecologies of sanitation (also McFarlane et al., 2014; Bardosh, 2015; O'Reilly et al., 2017; Kotsila and Saravanan, 2017).

This paper was informed by the Integrated Behavioural Model for Water, Sanitation, and Hygiene (IBM-WASH model) by Dreibelbis et al. (2013). It provides a comprehensive classification of WASH determinants which outlines three dimensions of WASH outcomes in terms of the contextual, psychosocial, and technology influences operating at several different levels (Table 1). The consideration of community and societal/structural levels together with habitual, individual, and household levels signifies an integration of the toilet tripod arguments emphasizing influences of a broader socio-political context with behavioural models focused primarily on individual and household levels. The IBM-WASH model can thus be useful in our effort to reflect both of the two distinct perspectives of in sanitation research in our case study. The psychosocial dimension of the IBM-WASH model mainly contains factors that are amenable to interventions from the RANAS model. In addition, the IBM-WASH model incorporates contextual factors that, although typically cannot be manipulated by interventions, are no less important to understand because they can interact with psychosocial and technology factors and significantly influence sanitation outcomes. However, the comprehensiveness of the IBM-WASH model is both a strength and a limitation. The IBM-WASH model is helpful as an organizational framework but it does not express potential interactions between particular factors or their causal links to different WASH outcomes. In this study, it was used to organize our survey instrument and to structure the presentation of results in this article.

The remainder of this article is organized as follows. In the ensuing section, we describe data and methods used in this study. We then attempt to put our case study into a broader political context of the Ethiopian sanitation strategy and its implementation. Subsequently, we address the technological dimension of sanitation in the surveyed communities. Later, we examine the role of contextual factors that operate at the village-, household-, and individual-level. Next, we consecutively analyse different aspects of the psychosocial dimension of sanitation by exploring perceived advantages, disadvantages, or motivations for particular steps in the sanitation process, perceived social norms around the unacceptability of open defecation (OD) and latrine use, and identified sanctions, the role of sanitation and hygiene knowledge, and the perception of health risks related to sanitation. Finally, we discuss our findings and attempt to integrate them to outline the salient features of the sanitation situation in the analysed region.

3. Data and methods

With the exception of the following section, which is based on secondary information used to describe national and regional political context of sanitation, this study utilizes data collected during September and October of 2015 in 11 rural kebeles (the smallest administrative units in Ethiopia) of the Kindo-Koysha and Diguna Fango woredas (districts) in the Wolaita Zone, Southern Nations, Nationalities, and Peoples Region, Ethiopia. The paper uses the same data set as in our previous study by Novotný et al. (2017) which, however, focused on more specific and different research question. The research site was predominantly rural and considerably restricted in terms of infrastructure, limited in accessibility, and environmentally and socioeconomically vulnerable. The basic characterisation of the research site can be found in Appendix A.

The selection of kebeles sought to reflect the diversity of local environment.. We firstly divided the kebeles in each district into three subgroups based on prior information on their accessibility and elevation (these two parameters were related) and access to protected drinking water and then determined the sample of 11 kebeles randomly from the subgroups. The allocation of our sample to the subgroups was not strictly proportional because the available data on population distribution was imperfect.

We performed structured interviews and direct observations in 368 households (31–39 per kebele) with the help of five experienced enumerators knowledgeable of local context (one female and four males). The interviews were administered in the local language, Wolaita. The enumerators were speaking both English and local language and they were trained specifically for the purposes of this survey. A random walk method was used to sample individual households within selected villages with the aim to cover the spatial organization of each village. Google satellite maps and sketch maps developed with the help of locals were used to specify random walk instructions to enumerators. When available, the head of household was interviewed. Otherwise, another adult member of the household was interviewed. Our structured interviews consisted of 100 items consisting predominantly of closed-ended questions or statements and a few open-ended questions (86 items). The last part of our survey instrument contained a predefined form for records from direct observations of sanitation facilities and their surroundings that were undertaken to assess the availability of latrines and the basic parameters of their functionality (14 items). The survey instrument was firstly developed in English and each question was then translated to local language and repeatedly discussed with the enumerators both before and after testing the survey instrument in one non-selected village. The basic descriptive statistics for the sample can