

Rural Household Knowledge, Attitude and Practice (KAP) on Safe Water, Sanitation and Hygiene: A Study in Five Provinces¹

Introduction

Progress in expanding the reach of essential water supply and sewage disposal infrastructure and sanitation facilities in Cambodia has been slow mainly because from the late 1970s to the mid-1990s rural water supply and sanitation activities out of necessity focused on the provision of emergency relief. Earliest available data indicates exceptionally low rural sanitation coverage of just 2 percent in 1995 and only 8 percent in 2002 (Rosenboom 2011). Coverage has since increased, rising sharply to 14 percent in 2004 and almost 22 percent in 2005 (World Bank 2008). However, as the Ministry for Rural Development's (MRD) National Sanitation and Hygiene, Knowledge, Attitudes and Practices (KAP) Survey in 12 provinces in 2010 reports, only 29.6 percent of households have access to a latrine.

Low access to safe drinking water and poor sanitation and hygiene (S&H) practices are a drain on the Cambodian economy. Poor sanitation is responsible for estimated annual economic losses of USD448 million, equivalent to about USD32 per capita or 7.2 percent of Cambodia's GDP in 2005 (World Bank 2008). That one in six (17 percent) Cambodian children die before their fifth birthday largely from preventable conditions related to diarrhoea caused by contaminated water, poor hygiene and lack of sanitation is a stark reminder of the human cost (Mom 2011). Although poverty decreased from 30.1 percent in 2007 to 27.2 percent in 2010, household investment in sanitation facilities remains low. With over 80 percent of the population living in rural areas, improved rural S&H coverage is imperative for social well-being and poverty reduction. Prime Minister Hun Sen underscored its importance when he said "In Cambodia, poor sanitation and hygiene is one of the factors contributing to the poverty of Cambodian people and blocking the efforts of the Royal Government

of Cambodia in national economic development" (World Bank 2008: 5).

The government is now better positioned to focus efforts more on long-term initiatives to develop rural water supply and sewage disposal infrastructure and raise public awareness to boost the uptake of S&H practices. Access to clean water and latrines and the promotion of S&H practices have been prioritised and integrated into the national strategic development framework (CDC 2011). Cambodian Millennium Development Goal 7 (Ensure Environmental Sustainability) aims to provide access to safe drinking water to 50 percent and improved sanitation to 30 percent of the rural population by 2015. To support these priorities, the National Policy on Water and Sanitation was drafted in 2003. This policy highlights the government's clear vision that "every person in rural communities has sustained access to safe water supply and sanitation services and lives in a hygienic environment by 2025" (World Bank 2008: 9).

Background to the Study

With the overall goal of strengthening the promotion of S&H practices in rural communities, the MRD has established the Cambodia Rural Sanitation and Hygiene Improvement Programme (CR-SHIP) in partnership with Plan International Cambodia with funding support from the Global Sanitation Fund (GSF) of the Water Supply and Sanitation Collaborative Council (WSSCC). The CR-SHIP aims to increase access to improved sanitation and advance proper hygiene practices by: (1) encouraging the consistent use of latrines, handwashing with soap and safe drinking water in rural communities; and (2) developing and strengthening the capacity of government, local authorities and local NGOs to promote better sanitation and hygiene practices.

To establish benchmark information for the CR-SHIP on rural household knowledge, attitude and practice (KAP) on safe drinking water and storage, construction and utilisation of household latrines and hygiene practices, CDRI conducted a baseline household survey in Kompong Cham, Kandal,

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Takeo, Svay Rieng and Kompong Speu provinces. This article reports the key study findings from which some recommendations to improve the effectiveness of public health S&H messages and boost the adoption of better S&H practices are drawn.

Methodology

The study team employed both quantitative and qualitative approaches consisting of a survey of 841 randomly selected households, semi-structured interviews and observations. Qualitative information was gathered via 20 key informant interviews (KIIs) and 40 focus group discussions (FGDs). KIIs with village chiefs, commune councillors, parents and teachers as well as local health facility and Provincial Department for Rural Development (PDRD) staff provided broad insights into the overall effectiveness of S&H practices in the study areas. FGDs with women-only groups, mixed groups of women and men, primary school teachers and primary school children provided detailed information on problems relating to household adoption of S&H practices. Supported by PDRD staff, field data was collected over 10 days from 27 November to 6 December 2011. Data was then entered into SPSS and transferred to STATA for analysis.

Findings

Utilisation and Construction of Household Latrines

More than half of the sample households (60.17 percent) do not own a latrine, indicating that nearly 40 percent own some type of latrine. Majority (97.31 percent) of latrine owners have an improved latrine type—flush or pour-flush draining to a septic tank or pit (Table 1)—about 96.42 percent of whom reported their latrine to be in working order (Table 1); only 5 percent said that it is not the first one they have owned, suggesting that many of the households are new latrine owners.

The main reasons given for households not owning a latrine are money/high cost of building one (97.80 percent), no locally available construction materials (26 percent), and no external support such as government and NGO subsidies (10.50 percent). FGD results confirmed that a household's financial status is one of the main reasons for not having a latrine. One participant in a women-only FGD stated "It's not easy to sell labour for building a latrine, since what I earn is gone [spent] everyday",

² 4100 riels equal USD1

Table 1: Household Latrine Ownership, by Type (n=335)

Type of latrine	Percent
<i>Improved</i>	
Flush or pour-flush to sewer	0.6
Flush or pour-flush to septic tank or pit	97.31
Total	97.91
<i>Unimproved</i>	
Flush or pour-flush to elsewhere	0.9
Open pit latrine without slab	0.3
Latrine overhanging water	0.6
Other	0.3
Total	2.1

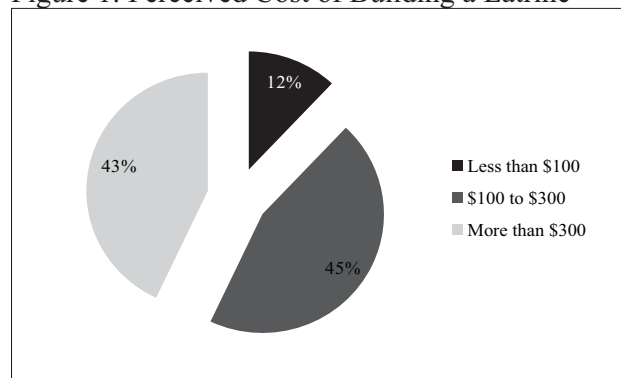
a point echoed by a commune councillor - "I have never heard anyone talk about difficulties in using a latrine, they only talk about money. If they have money, they can build a latrine".

Interestingly, regardless of financial status households' preferred choice of latrine is the more expensive water-flush type. Households without a latrine (86 percent) opted for the water-flush type and would build one if they had enough money, as affirmed in the women-only FGD in Kompong Cham - "I don't want to build an open pit latrine without a slab (dry latrine) because it is too dirty and I'm waiting until I have enough money to build a flush latrine".

Household Perception of Latrine Construction Cost

Sanitation marketing programmes, supported by NGOs in partnership with private construction material outlets and local authorities, are operating in the study provinces. For example, Lien Aid runs educational programmes and cooperates with local authorities (village chief, commune councillors) and local builders merchants/outlet stores to transfer skills on treating water and building sanitation infrastructure to local communities. The cost of a flush or pour-flush latrine, consisting of three soak pits and one pour-flush pan, is KHR164,000 (USD40)², including free delivery. A commune councillor from Choeung Prey district, Kompong Cham, remarked "buying [a latrine construction set] from Lien Aid is cheaper than [buying one] from a private source which costs KHR200,000 (USD48.78) or more; the cost of one soak pit varies by about KHR10,000 (USD2.43)".

Figure 1: Perceived Cost of Building a Latrine



Household perception is that the cost of building a latrine is prohibitive. For example, only 12 percent of the households believed the cost to be less than USD100, whereas more than three-quarters thought it would cost USD100-300 or more to build an acceptable latrine for their family (Figure 1). It is likely that insufficient personal savings is the main barrier preventing households that have not yet installed a latrine from doing so. At the same time, the general perception that the cost of an adequate latrine is much more than it actually is further discourages households from building one.

Key informants' (villagers, commune chiefs, village chiefs) knowledge on loans offered by microfinance institutions (MFIs) to build sanitation facilities was patchy. Most had no idea that latrine-related credit even exists, but some were aware that such loans are available from MFIs. Indeed, many MFIs have started to extend services to the villages, but sanitation-related loans are not always considered by either the MFIs or villagers. Although villagers often use MFI loans to invest in rice and crop farming, they are unlikely to borrow money from an MFI to build a latrine. Asked about their views on using MFI services to build a latrine, 92 percent of households showed no interest in doing so. The common reason given for this reluctance is (the fear of) being unable to make the regular repayments required as a condition of an MFI loan (83 percent). Observations from FGDs and KIIs support these views:

None of the villagers here have used an MFI loan to build a toilet because MFIs do not allow it; also, people dare not borrow, as they are afraid of not having the money to pay back the loan... (Chief of Santech Lech

village, Dong Kda commune, Kompong Cham province)

NGOs (MFIs) do not provide loans for building toilets...if we want to borrow, they will give us a loan, but we do not want to do this because we are afraid we cannot pay them back... (Chief of Angkor Chey Leu village, Moha Khnong commune, Koh Sotin district, Kompong Cham province)

[I] don't dare to borrow or use a loan for building a latrine, [I have] no means to pay back the loan because a latrine cannot make income... (Woman from Santech Lech village, Dong Kda commune, Kompong Cham province)

[I] never think about borrowing money to build a toilet or buy a water filter because [I am] afraid of losing [our] rice farm... (Father of four children in Trapeang Sla village, Sompong Chey commune, Cheung Prey district, Kompong Cham province)

Household Knowledge of Safe Drinking Water, Sanitation and Hygiene

Mass media (television and radio) is households' main source of public health information or messages, followed by community meetings (including community training) which also provide an effective channel for conveying hygiene and safe drinking water messages to rural communities. Households had heard or received messages about drinking safe water (57.90 percent), building latrines (36 percent), and handwashing with soap (32.70 percent) in the past year.

Households generally associated S&H with clean/safe water (80 percent), hand hygiene and cleanliness (64 percent) and food hygiene (44 percent), and were aware of how to maintain good standards of cleanliness and hygiene. Respondents' knowledge of how diarrhoea spreads and its prevention was also notable; they were aware that diarrhoea can be transmitted through unclean food (67 percent), unclean water (67 percent), flies (60 percent) and dirty hands (48 percent), though only 17 percent knew that diarrhoea can spread through open defecation (OD).

Knowledge on S&H is significantly correlated with the household head's educational attainment. Using Spearman's correlation, household head's education positively correlates³ with knowledge on

³ Significant at 1 percent level, with a correlation coefficient of 0.165

how diarrhoea is contracted, and is also positively correlated with household knowledge on how diarrhoea is spread at 5 percent level and a correlation coefficient of 0.085. This suggests that the higher a household head's education, the more likely it is that household members understand the concept of S&H practices, maintain good standards of S&H, and know how to prevent diarrhoea. Additionally, household heads viewed good health, i.e. avoiding sickness and preventing infectious disease (94 percent), as the main reason for maintaining good S&H standards. They were also aware of the value of handwashing, but their perception of the critical times for doing so differed according to their occupation: female household heads were more aware of the need to wash hands before preparing food and cooking, while others responded that before and after eating and after defecating were the most important times.

Household knowledge of water storage and treatment is also high. The main reasons cited for storing water are to prevent contamination (75 percent), to keep it clean (23 percent) and safe (19 percent). They also affirmed that they treat drinking water to combat contamination by germs, bacteria, dirt or faeces (62.30 percent), for good health (50 percent) and to prevent sickness (19 percent).

Household Adoption of Safe Drinking Water, Sanitation and Hygiene Practices

Ideally, hand-washing should be habitual rather than an occasional occurrence. Participants reported they tend to only wash their hands before eating, especially after working in the rice field, after using the latrine (defecation) and when their hands are dirty. However, it is likely that children wash their hands more often than adults. For example, one parent declared "My children are better at washing their hands than me and my husband; they always ask – have you washed your hands yet?" This is possibly because school teachers constantly remind children about S&H, especially the importance of hand-washing. School children explained "teachers advise us to wash our hands regularly, before and after eating, and to wash our hands with soap after cleaning up garbage or dirt..." A school principal added that "school children wash their hands because it is a school requirement".

FGD and KII findings support the survey observations that people wash their hands with

only water or soap and water, and that a few use ash. Households that use only water claimed that the cost of soap is a barrier to adopting the practice of hand-washing with soap. This was confirmed by discussion in one of the women-only groups – "if [we] wash [our] hands with soap, [we] need to spend money on soap, so [better to] save money to buy monosodium glutamate for cooking for two days". Another participant added that "washing powder used to be sold in small packages for just 100 riels each, but now it can only be bought in larger quantities that cost 500 riels or more per package". Health centre staff expressed their concern about community attitudes, saying "soap is available in every household but they don't wash... they (villagers) often say that they never wash their hands and never have problem".

More than four in five households (82 percent) treat their drinking water, mainly by boiling (90.50 percent) or using a water filter (10 percent). They believe that treating drinking water is good for maintaining health. Those who do not treat drinking water explained they have "no time" to do so. A small percentage of households follow the traditional practice of not boiling or treating drinking water as they are not accustomed to it. The traditional belief that untreated water is better for health is another factor discouraging households from treating drinking water. For example, a primary school teacher mentioned that "villagers don't believe [in boiling water], they say we have been drinking water from cows' footprints (*dan chheung kor*) since our grandparents' generation".

Household Attitude towards Adopting Safe Drinking Water, Sanitation and Hygiene

The study findings confirm that the majority of the households have favourable attitudes towards safe drinking water, hand-washing and especially the use of an improved latrine, though some still follow the traditional practice of drinking untreated water and have not adopted habitual hand-washing. More than four in five households (82 percent) treat their drinking water, mainly by boiling or filtration. Almost all household heads confirmed that habitual hand-washing, either with just water or water and soap, is common. Households with a latrine use their own or a public facility, whereas majority of those without a latrine always practice open defecation (OD) (65 percent) or bury their waste (23 percent).

Conclusion

Rural household knowledge on sanitation and hygiene, safe drinking water and water storage is high. Attitudes towards adopting S&H practices, drinking safe water, and especially using an improved latrine are positive, though some households traditionally favour drinking untreated water and do not practice hand-washing as a routine S&H measure.

Households that own a latrine tend to keep it in working order and household members always use it. Those that do not have a latrine always practice OD or bury their waste, and use the same defecation sites in wet and dry seasons. Pour-flush latrine is the preferred type, irrespective of household wealth status. But the perception that the building cost is prohibitive discourages households from even considering the idea of installing one. That majority of households tend to use a public latrine when in a public place such as a pagoda or school suggests there is no particular resistance to having a latrine and underlines the finding that cost, or perception of cost, is the main constraint. Households are reluctant to take out an MFI loan to build a latrine not only because they are afraid of being unable to meet the repayment conditions but because investing in a toilet does not generate income, indicating that earning an adequate daily living is a higher priority than access to improved sanitation. Several respondents affirmed they would save for a latrine if they could earn enough to cover their daily needs and build some savings.

Households are aware of the value of hand hygiene, though depending on their occupation they have different views on the critical times for hand-washing. Almost all the households confirmed that routine hand-washing with either water or soap and water is common, usually before and after eating, after defecating and when hands are dirty. Children tend to wash their hands more often because S&H is part of the school curriculum and teachers constantly remind pupils about the importance of washing their hands.

Most households treat water for drinking by boiling or filtering it so as to maintain good health, and know how to store water safely to prevent contamination.

Recommendations

Although not a solution to the problem of low water and sanitation coverage in rural areas or a substitute for access to safe water and latrines, improving the

promotion of S&H messages and encouraging the adoption of routine S&H practices can go some way to helping rural people look after their health to the best of their ability and resources. Drawing on our survey findings, we suggest the following actions be considered in policy and planning:

- Design a Behaviour Change Communication programme to target the small percentage of households who have not adopted S&H practices and to boost public acceptance and use of safe water and storage.
- Prioritise media broadcasting of public S&H education programmes; radio and television are important channels for informing and motivating people regardless of their educational attainment.
- Promote well-designed community training as a secondary source of conveying hygiene promotion and safe drinking water messages to keep reminding people about the benefits of S&H practices.
- Build on past interventions which provided latrine construction loans in the form of savings groups and devise similar schemes for communities and households that cannot afford MFI loans.

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