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Understanding How Sanitation Sales Agent Gender Affects Key Sanitation Behaviors in Nepal

Policy Brief

Evidence From a Research Study in Nepal

In 2017, The Water, Sanitation, and Hygiene Partnerships and Learning for Sustainability (WASHPaLS) project awarded a grant to International Development Enterprises (iDE), a US organization based in Denver, CO, to carry out research to explore the role that women play in the sanitation value chain in Nepal, and how these roles may impact key behaviors such as latrine purchase and use. This research aligns with the overall objective of the WASHPaLS grants program to investigate the effectiveness of innovative approaches to improving and sustaining hygiene behaviors, and more specifically to support learning related to gender equality and social inclusion (GESI) principles of hygiene behavior change (HBC).

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LOCAL CONTEXT AND PROGRAM BACKGROUND

As of 2015, only 46 percent of all households in Nepal had access to a basic latrine; and only 45 percent in rural areas.¹ The Government of Nepal set an ambitious goal of reaching 100 percent open-defecation free (ODF) status by the end of 2018. In this context, iDE has worked since 2011 through its Sanitation Marketing program to help the Government of Nepal meet these objectives. The program builds on iDE's global leadership in market-based approaches and Human-Centered Design (HCD). iDE Nepal found that existing latrine options were undesirable and difficult to install and purchase. In response, iDE prototyped and finalized a design for the Easy Latrine, an affordable, aspirational, packaged, and ready-to-install improved pour-flush latrine. iDE also used insights gained from the HCD process and other research to design business models and training for two key market actors: latrine producers and commission-based sales agents (also known as community business facilitators, or CBFs).

This research relied on a mixed-methods approach utilizing quantitative and qualitative strategies to better understand the main drivers and barriers for female sales agents in promoting latrine purchase and key sanitation behaviors. In addition, the research team also carried out a series of focus group discussions (FGDs) with sales agents to better understand the attitudes, competencies, and execution strategies they employ to promote latrine purchase and use. The team held six FGDs in total, comprising two gender-specific groups in each of three research districts.

METHODOLOGY

The research relied on a mixed-methods approach utilizing quantitative and qualitative strategies to better understand the main associations between gender of sales agent and key sanitation behaviors. Quantitative data collection consisted of a household survey administered to 600 iDE customers randomly selected from a sampling frame developed from order forms and project records. iDE's field research focused on the following principal question and two sub-questions, each of which has a series of associated outcomes of interest.

Principal question: How does a sanitation sales agent's gender correlate with end-user hygiene and sanitation behaviors as related to purchase, installation, and use?

- **Sub-question 1:** Are women sanitation sales agents more successful at motivating households to purchase and install a latrine? Are they more successful at selling to certain types of households? Why or why not?
- **Sub-question 2:** Are households who purchase a latrine from a female sanitation sales agent more likely to practice key hygiene and sanitation behaviors? Why or why not?

The research team also carried out a series of focus group discussions (FGDs) with sales agents to better understand the attitudes, competencies, and execution strategies they employ to promote latrine purchase and use. The FGDs were designed as a qualitative complement to help us better understand *why* we might be seeing differences in our dependent outcomes based on sales agent gender.

¹ Joint Monitoring Programme. Data available at washdata.org.

ANALYTICAL APPROACH

Our first step was to analyze dependent variables or outcome variables as averages across key stratifications such as gender of sales agent and marginalized households, where appropriate. We used post-estimation hypothesis testing to test for paired-mean differences in our outcomes between clients who purchased from female sales agents and those who purchased from male sales agents.

Second, to study our outcomes of interest, we used a combination of model specifications given the different types of dependent variables. For the continuous dependent variables, we used ordinary least squares (OLS). For the binary or nominal outcomes of interest we used logit models to estimate parameters. For each outcome model, our primary covariate of interest was the gender of the sales agent (CBF_i). We looked for statistically significant relationships between sales agent and the dependent variable while controlling for other covariates. Table I describes which model we used to answer our different research questions.

Table I: Primary Model Specification

Dependent Variable	Proxy for which Sanitation Behaviors	Variable Type	Model
Trustworthy reason for purchase (R3 _i)	Latrine purchasing behavior	Binary	Logit regression model
Value reason for purchase (R5 _i)	Latrine purchasing behavior	Binary	Logit regression model
Time lag on purchase decisions (T _i)	Latrine purchasing behavior	Continuous	Ordinary least squares
Latrine shelter (S _i)	Latrine installation behavior	Binary	Logit regression model
Intra-household use (IU _i)	Key hygiene behaviors	Continuous	Ordinary least squares
Hand hygiene (HH _i)	Key hygiene behaviors	Binary	Logit regression model

For each outcome variable of interest, we ran the same three regression models. The primary explanatory variable for each model was gender of the sales agent that sold the household their latrine. We then had three separate model specifications in which sales agent gender was interacted with another explanatory variable: whether a female was involved in the latrine purchase decision, whether a female was involved in funding the latrine purchase, and whether the household was marginalized. The interaction models helped us to understand if an observed association had a differential effect contingent upon other explanatory factors.

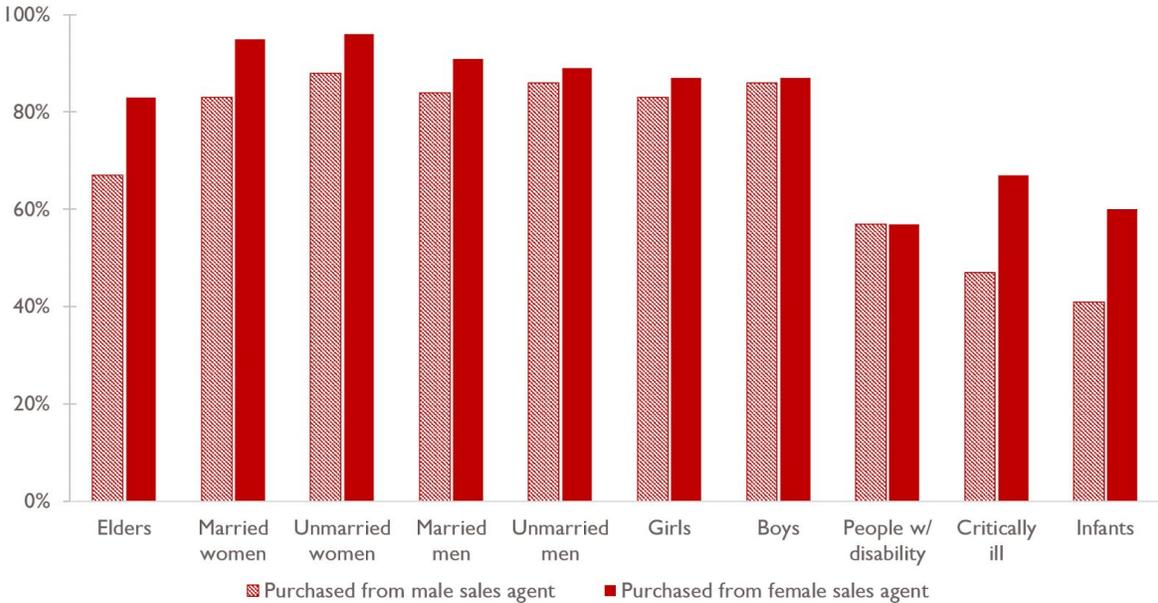
For the results, we use the terms “inclusive households” and “non-inclusive households.” Inclusive households are those in which a woman (or women) either funded the latrine purchase, participated in the latrine purchase decision, or both. Non-inclusive households are those in which men were exclusively involved in the funding and purchase decision making process. We also use the terms “marginalized” and “non-marginalized” households. Marginalized households are poorer and more likely to be ethnic minorities than non-marginalized households; the categorization was made based on socioeconomic status and ethnic characteristics collected through the household survey.

RESULTS

Our principal finding is that gender inclusion in latrine purchase and funding decisions, as well as marginalized household status, are key determinants when analyzing how a sales agent’s gender influences key behaviors. Together, these findings point to the importance of understanding the interactions between a sales agent’s gender and the type of household that a sales agent is addressing.

One key result was observed on the usage of latrines within households, a concept regarded as “Intra-household Latrine Use.” This study adapted the Safe San Index (SSI), an index used to quantify the hygienic safety of a household’s defecation and human feces disposal practices using 15 self-reported items and two subscales. The results support the theory that household type and the individuals making decisions within a household are key drivers for the observed differences in intra-household use rates between clients of male or female sales agents. The figure below demonstrates differences in use rates in multiple groups, such as the elderly, critically ill and infants.

Figure I: Intra-household Latrine Use Rates: Percent of Household Members Always Using the Latrine (by Member Group)



Statistically significant differences among married women, the critically ill, and proper infant feces disposal show that female sales agents were associated with consistently higher rates of latrine use by certain groups within the household. The groups with significant differences seem to be those who fall into the caregiver or care-receiving categories in a household.

The interaction models showed that intra-household use was statistically the same between households that purchased from either gender sales agent for the non-inclusive and non-marginalized households. However, when we looked at inclusive and marginalized households, there was a significant difference in intra-household use, whereby households reported higher rates of intra-household use when they purchased from a female sales agent.

Aside from the above-mentioned intra-household latrine use findings, this research has also established:

- Households that purchased from a female sales agent were associated with quicker purchase time lags when there was a female involved in the decision making—that is, female sales agents were more effective selling to women in inclusive households.
- The difference in installation outcomes between clients of male and female sales agents, as measured by rates of permanent shelter installation, only exists for non-marginalized (less poor and non ethnic minority) households where households that purchased a latrine from males sales agents were more likely to have a permanent shelter installed.
- Household type (male decision-maker only; female decision-maker involved; male funder only; female funder involved; non-marginalized household; marginalized household) and the individuals making decisions within a household are key drivers for the observed differences in intra-household use rates.

RECOMMENDATIONS

Based on the study’s findings, we offer the following recommendations for organizations seeking to leverage local entrepreneurs to drive positive changes in sanitation coverage and key sanitation behaviors:

1. Match household funding and decision profiles with the appropriate sales agent.

Understanding who will be involved in the funding and decision making process for buying a latrine may allow organizations to make better use of their human resources.

2. Match household socio-economic profiles with the appropriate sales agent.

This study found that female sales agents appear to be more effective at driving positive sanitation behaviors among marginalized households (defined here as poor, ethnic-minority households), while men were more effective with non-marginalized households.

3. Explore opportunities to improve female (and male) sales agents’ use of social capital.

It is worth exploring further how male and female sales agents view and use their respective social capital reserves to encourage more effective use of social networks.

4. Train male (and female) sales agents to communicate behavior change messaging effectively through focused follow-up.

Future programs might explore opportunities to train male sales agents to adopt the same posture toward follow-up, potentially using female sales agents’ experience as a learning guide.

5. Align desired programmatic outcomes with sales agent profile.

The results from this research (i.e. the correlation between sales agent gender and hygiene behaviors of various sub-groups within the household) may provide guidance for programs that aim to promote consistent use within certain household groups.

6. Encourage learning between male and female sales agents.

This research established several ways in which male and female sales agents approach their jobs differently. These distinct approaches represent productive opportunities for learning and improving the way that each sales agent does his or her job.

Link to full report: <https://tinyurl.com/ide-washpals>