

CASE STUDY:

Using QuIP to evaluate the impact of distributing Divya manual washing machines in communities which rely on women handwashing clothes

- **COMMISSIONER:** The Washing Machine Project (TWMP)
- **COUNTRY OF STUDY:** India
- **INTERVIEWS:** 24 individual interviews and 2 focus groups
- **YEAR OF STUDY:** 2025

THE PROJECT

The Washing Machine Project (TWMP) is a grassroots organisation which distributes manual washing machines to communities and individuals. The Divya is a small flat-packable washing machine which works off-grid, saving up to 50% of water and 75% of the time compared to handwashing clothes. Through distribution of these machines TWMP aims to alleviate the burden of handwashing clothes, a task which falls primarily to women and girls. TWMP hopes that women and girls will have reduced exposure to physical strain and washing irritants, and more time to spend on income-generating activities and education. Using less water also means that this water can be repurposed for hygiene or cooking practices. TWMP now work in Uganda and Mexico, but their programme was first piloted in Tamil Nadu in India, where they have their largest presence, hence a good location for an initial evaluation.

WHY USE QuIP?

TWMP had collected a large amount of quantitative data through surveys with people living in the area and anecdotal feedback through their local delivery partner, Kynarou. Whilst this data was informative, TWMP wanted additional detailed causal information to understand the wider drivers and impacts on women's domestic burden from the perspective of the users. QuIP's outcomes-based approach to data collection and Bath SDR's independence from the project was designed

to encourage respondents to speak more freely about all relevant drivers of change, including challenges and limitations, and to capture the causal mechanisms users articulated when prompted to talk about what had changed in the domains TWMP expected to have impact in. The team felt that understanding relevant causal pathways for this population would be helpful for future programme design, both in these communities and more widely.

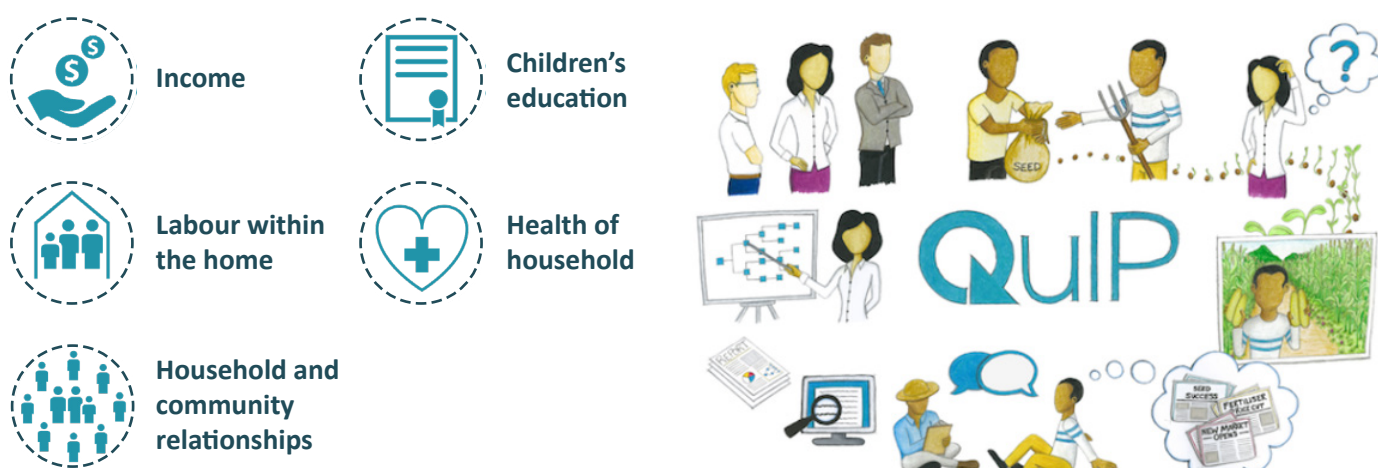
APPROACH

Bath SDR recruited a local research team by asking for recommendations from a local university. The team was made up of two women with extensive experience as qualitative researchers in Southern India. These researchers had never worked together before but over a series of online training sessions and follow-up calls they quickly formed a strong working relationship.

We chose to conduct interviews in Salem and Theni where **80** machines had been distributed over the last year – meaning that women would have had time to use the machines for at least a few months and be able to report on longer term impacts. TWMP's existing demographic information about all recipients helped us identify possible participants. Together with TWMP we decided to prioritise women with children, as this group was expected to see the most change.

To capture any differences in the impact across locations and communities, our sample included an equal number of respondents from both districts and village selection split the sample between predominantly Dalit and non-Dalit communities. Once all potential respondents were grouped by location and community, researchers randomly selected six participants from each group. These individual interviews were accompanied by two focus groups, one in each district. These group discussions were also conducted with women using the washing machines but had a stronger focus on intended and unintended **community-level** impacts of the project.

Outcome domains: The questionnaire used in this study was divided into the following relevant domains, based upon TWMP's theory of change.



We attempted to use blindfolding; neither researchers nor respondents were informed of the project being evaluated. However, due to the limited number of NGOs operating in the area most respondents suspected TWMP's delivery partner Kynarou was the organisation of interest. Despite this, researchers were able to the outcomes-led interviews to collect information not captured in the surveys and conversations directly conducted by Kynarou. Researchers explained that they were working for an independent organisation and had an interest in changes in respondents' lives wider than the changes in household chores. This encouraged respondents to speak openly about positive and negative changes. You can read a fascinating blog from one of the researchers about their experiences of conducting the interviews [here](#).

Researchers shared translated summaries of the transcripts and Bath SDR used the Causal Map app to code and analyse this data.

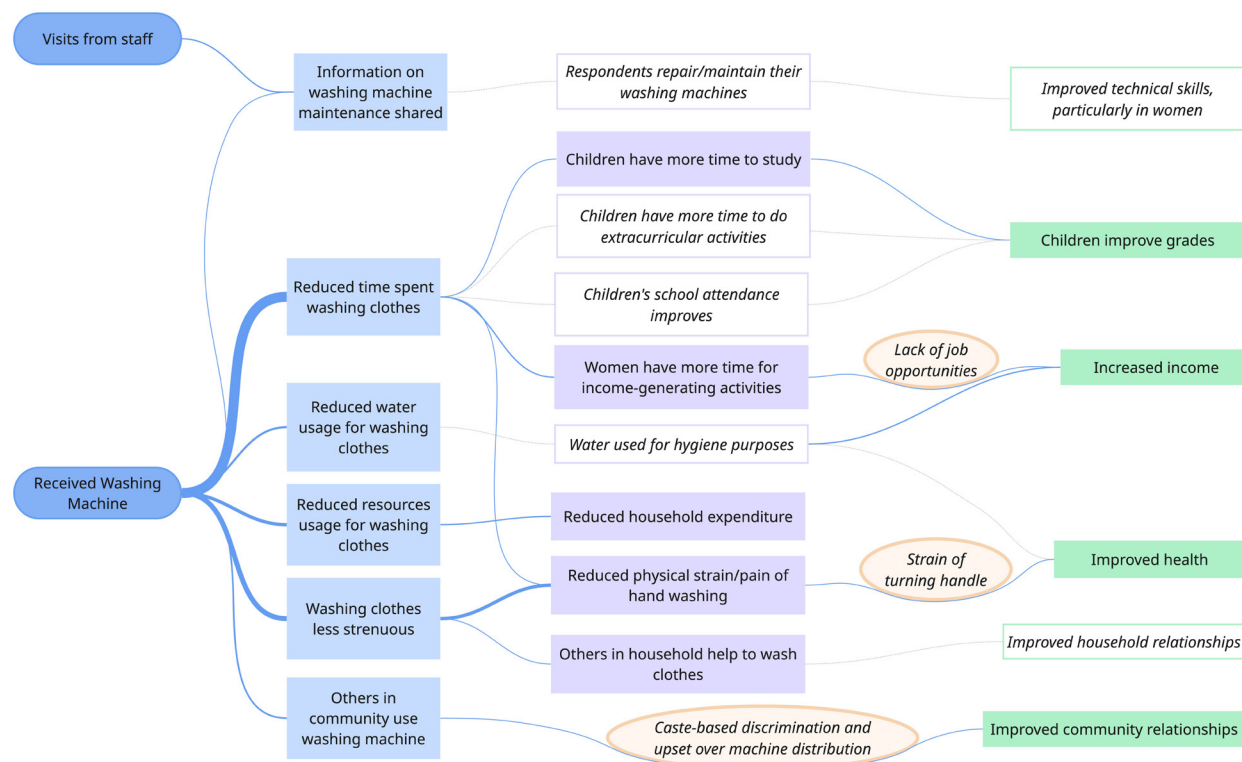
FINDINGS

This evaluation found strong evidence that TWMP were achieving their main, direct intended outcomes; reduced time spent on household chores and reduced water consumption. Women certainly appreciated the free time and reduced physical strain of using the machine compared to the chore of handwashing. However, there was less evidence of longer-term outcomes such as changes to gender dynamics and increased income; women shared that social norms and limited job opportunities hampered positive change in these areas. One unanticipated effect was increased tensions within the community due to a perception that the machines were unfairly distributed, and shared use of machines was often problematic.

The figure below shows TWMP's theory of change with scaled connecting lines based on the evidence we found in the QuIP interviews for each intended link. Links are scaled to reflect the number of respondents who mentioned a connection between driver and outcome, without prompting. As links become thinner towards the right hand side, this shows less evidence for those expected causal pathways. Grey links indicate that no respondents mentioned the link. Outcomes with a white background and italic text signify that no respondents mentioned that outcome. Text in orange circles show the challenges to intended outcomes cited by respondents.



SUPPORTING EVIDENCE FOR TWMP'S THEORY OF CHANGE



This figure demonstrates that the direct positive outcomes assumed in the theory of change were reported, with most women reporting relief from the physical, time and resource intensive aspects of hand washing. The challenges highlight that some of the medium and longer-term outcomes are much harder to predict and there is evidence that wider systemic issues, particularly around available work for women, will challenge some the assumptions made in this theory.

TWMP hope to increase women's income and financial independence through increasing the time they have available to spend on income-generating activities and through reduction of household expenses. Most respondents did indeed report that machine washing clothes had reduced the time they spent on household chores, both through less time spent washing the clothes and fetching water. However, few respondents spent this time on income-generating activities due to few job opportunities in the local area. For many this was compounded by childcare responsibilities, which limited their capacity to participate in work outside the home. Most respondents explained that their husband remained the sole or primary source of income for their household. The causal pathway leading to children's grades improving was different to that intended - actually explained by children being able to help their mother with the task (turning the Divya crank), giving her more time to support her children with homework.

"In our village we don't have any such facilities that we can go to work and earn something. If there was a source [of income] in our village the women of our village would definitely make use of the saved time from our household work."

- Respondent from Salem

"I use the machine to wash clothes, my back pain is less than before, but some days my shoulders pain after spinning the handle for 20 mins."

- Respondent from Theni

The health-related aspects were more clearly evidenced. Using a machine to wash clothes was less strenuous and reduced pain for many women, although some respondents also noted new pains from repetitively turning the handle.

The washing machines did reduce water consumption, however no respondents explicitly linked this to the longer-term outcome of improved hygiene practices and health. Health benefits from reduced contact with detergent were also not explicitly mentioned by any respondents, but some mentioned saving money from buying less soap.

Washing machines are shared within the community and this is expected to improve relationships. Positive outcomes for community relationships were reported, including good interactions with NGO staff, and one respondent linked their neighbours visiting to share their machine to improved relationships. However, there were challenges with sharing the washing machines; competing schedules, caste-based discrimination and upset over those who had received the machine. Some villagers also shared informally with the researchers that they were unhappy that they had not received a machine.

“With the washing machine situation, some of them are not okay about sharing it, some are not happy that it was not given to their home, so they don’t come to our houses to use it... If this fight over wash machines is considered [when thinking about changes in community relations] then it has actually created a rift in the community.”

- Theni focus group

USE OF FINDINGS

TWMP were able to triangulate the findings from this evaluation with their previous monitoring data to gain a fuller understanding of their impact. These combined findings were useful to both their programme and design teams. Through internal sense-making workshops they agreed upon changes to the project going forward, including improvements to communication with communities. They are also considering additional programme interventions to further promote education, livelihoods, and WASH objectives.

Due to the close relationships with respondents, respondents were unblindfolded (told more about the evaluation) informally by the local NGO staff from Kynarou, continuing productive and open conversations.

Bath Social & Development Research, curators of the QUIP, conducted this study.
For more information please see www.bathsdr.org

