

A photograph of a woman in an orange sari with a gold border, smiling and looking to her left. She is sitting on the ground, surrounded by other women in colorful saris. The background is slightly blurred, showing more people in a community setting.

# EVALUATION REPORT | 2021

Impact of P.A.C.E. on WASH Behaviors:  
Program Evaluation in Madhya Pradesh

## About ICRW

The **International Center for Research for Women (ICRW)** is a global research institute, with regional hubs in Washington D.C., United States; New Delhi, India; Kampala, Uganda; and Nairobi, Kenya. Established in 1976, ICRW conducts research to identify practical, actionable solutions to advance the economic and social status of women and girls around the world.

**ICRW Asia's** thematic focal areas include access to education and livelihoods, adolescent empowerment, gender-based violence, masculinities, gender inequitable attitudes, HIV prevention, and violence against women and girls.

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# EVALUATION REPORT | 2021

Impact of P.A.C.E. on WASH Behaviors:  
Program Evaluation in Madhya Pradesh



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# ACKNOWLEDGEMENTS

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# EXECUTIVE SUMMARY

Gap Inc. and the U.S. Agency for International Development (USAID) partnered in 2017 to launch the Women + Water (W+W) Alliance, a Global Development Alliance to improve the health and well-being of women and communities touched by the apparel industry. In particular, the Women + Water Alliance aims to increase access to safe water supplies and improve sanitation and hygiene practices. Through the Personal Advancement & Career Enhancement (P.A.C.E.) curriculum with women in the community, the program aims to enhance women's agency and self-efficacy in WASH (water, sanitation and hygiene) decision-making. CARE India conducted P.A.C.E. trainings with women in Madhya Pradesh (MP) and Maharashtra and International Center for Research on Women (ICRW) evaluated the impact of P.A.C.E. training with women.

Evaluation of the P.A.C.E. program has established that it is effective in building women's knowledge, skills and ability to navigate and negotiate at home and at the workplace (Nanda et.al., 2013). Unlike the usual pre-post study design where the baseline survey is conducted prior to the intervention, the first round of survey in this study was conducted soon after completion of the training as the objective was to examine two factors. First, the influence of P.A.C.E. training outcomes on adoption and maintenance of WASH behaviors. Second, to understand how women use both WASH knowledge and the life skills that they receive from P.A.C.E. to amplify their voice and take part in decision-making in the household.

The evaluation was conducted in two phases – baseline (first phase) and endline (second phase), in three districts of Madhya Pradesh: Dhar, Khandwa & Sehore. The baseline was conducted between Sept.- Dec. 2019, immediately after completion of the P.A.C.E. curriculum. The endline was conducted in February 2021 that was originally planned after one year from baseline (i.e. September 2020) but was delayed by five months due to COVID-19 pandemic. The same cohort of women who participated in the baseline were interviewed at the endline.

## ***Findings***

It is critical to remember that between the baseline and the endline, the community experienced COVID-19 pandemic and related restrictions such as lockdown and social distancing. The findings, therefore, must be contextualized within a setting where P.A.C.E. participants did not have the support of the program team nor of their peers or community members to help them maintain the awareness and practices that they may have cultivated during the P.A.C.E. training. While adoption of behavior requires knowledge and change in attitudes along with access to services, maintenance of behaviors in the long term is far more difficult, especially in the absence of any supportive strategies.<sup>1</sup> This implies that a decline in most of the indicators since the baseline survey was expected. However, 'no decline' could be interpreted as sustaining the behavior.

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<sup>1</sup><https://sbccimplementationkits.org/service-communication/case-studies/case-study-behavioral-maintenance-and-follow-up-in-bangladesh/>

## ***Access to WASH facility***

Access to improved sources of water reduced from baseline (89 percent) to endline (85 percent) as women's access to piped water (piped into dwelling/plot and public tap) declined and a higher percentage of respondents collected water from unprotected well at endline. Significantly higher proportion of women collected water in one trip at endline compared to baseline, but higher percentage of women reported collecting water from a source that was more than 500 meters away from home, hence increasing average time to collect water. It was observed that 46 percent women reported increase in the number of trips to collect water because of increase in household size during the pandemic. A significantly higher proportion of women were using a filter for water, but the majority continue to use cloth as a filter.

Access to improved toilets and availability of water near the toilet increased significantly at the endline. Percentage of respondents with no access to any toilet facility remained the same at both the surveys. Respondents without access to toilet facility have certain characteristics in common. Three-fourth of these respondents work in the agricultural sector, more than half have never attended school, nearly two-third belong to a low standard of living group and scored below average in self-efficacy and self-assertive efficacy.

The use of sanitary napkins has increased significantly at endline compared to baseline. Most of the respondents continued to use the same absorbent during the pandemic. Only 12 percent women reported not using the same absorbent during the pandemic due to their inability to go to the store, insufficient money to buy the desired product or non-availability of the preferred product.

## ***Attitudes and behaviors towards WASH***

Responsibility of collecting water for daily household needs remains primarily with women. Although the respondents were sharing the responsibility of collecting water, it is mainly with other women in the household and not with men. Similarly, respondents were sharing the responsibility of cleaning toilet with other women in the household but not with men.

The study also identified some positive changes in attitude towards toilet use and maintenance as reported by women at endline. A significantly higher proportion of women agreed that open defecation causes diseases. A positive shift in select gender attitudes was observed as a significantly lesser percentage of respondents agreed that cleaning the toilet is the responsibility of women alone and that male members should take the decision to construct a toilet. Practice of handwashing declined significantly for most of the activities including child fecal management since the baseline. Significantly lower percentage of respondents reported washing hands after disposing off child feces, after child defecates and before feeding the child. Despite the decline in handwashing, a higher percentage of respondents reported washing hands with soap each time after defecation, before cooking and before eating during endline than baseline. At this point, it is also important to recall that the availability of piped water reduced significantly and the average time to collect water increased significantly, which could have impacted the frequency of handwashing. About 32 percent women reported following

correct menstrual hygiene practices at both baseline and endline. Menstruation related beliefs remained unchanged.

## ***Decision making***

Women were responsible for taking water-related decisions in the household, such as decisions on how much water is required for daily household needs, the main source of drinking water, assigning the responsibility of collecting and filtering water and the type of water filter to be used. Fewer women reported taking decision on construction of toilet at endline compared to baseline. Decision on modification or construction of toilet were also mostly taken by men in the household.

Apart from taking decision on household related matters, 46 percent women reported that they took important decisions of their life on their own. There was also an increase in percentage of respondents, at endline, who took their decision to participate in SHG and how to spend their own money.

## ***Women's self perception***

While a significant decline was observed in the average self-efficacy and self-assertive efficacy scores at endline, the results indicate that COVID-19 influenced women's self-perception negatively. The respondents who reported that they can handle stress related to COVID-19 also had a higher-than-average self-efficacy score. Education was also found to have a positive association with both self-efficacy and self-assertive efficacy.

## ***Awareness and utilization of WASH financing***

The awareness of respondents about different government schemes such as Total Sanitation Campaign and schemes to construct water sources and toilets thus increased since the baseline. Women received information on government schemes from the sarpanch, neighbors or relatives and P.A.C.E. program trainers. A significantly higher proportion of women have bank accounts compared to the baseline but the ease of access to banking services have reduced. Reduced access to banking services may be associated with social containment measures taken during the pandemic.

## ***Factors associated with positive change in key outcome indicators***

The findings suggest that education, standard of living and SHG membership are factors associated with positive change in the self-efficacy and self-assertive efficacy score. It was observed that SHG membership is also positively associated with decision-making (for self) on mobility and healthcare and decision-making for the household on construction of toilets.

Key P.A.C.E. outcomes - self-efficacy and self-assertive efficacy have positive associations with the sustained ability to take decisions related to water and with sustained handwashing practices behavior especially before and after critical activities like after defecation, before cooking and before eating.



## ***Implications for P.A.C.E. Program for Women***

The evaluation thus implies that there is a need to continue investing in building women's self-efficacy and self-assertive efficacy both for improving WASH behaviors as well for building resilience. Especially in the context of COVID-19, which impacted women's self-efficacy negatively, the importance of P.A.C.E. training needs to be highlighted as those who felt that they could deal with any situation related to COVID-19 had higher than average self-efficacy. P.A.C.E. outcomes can be further strengthened by reinforcing key messages for a sustained period after completion of the P.A.C.E. training. In addition, the learning groups formed for P.A.C.E. training can further be leveraged for improving both the P.A.C.E. key outcomes and WASH outcomes like self-efficacy, self-assertive efficacy, participation of women in household decision making and adoption of correct handwash practice.

The learning groups provide a potential opportunity and platform for organizing women as Self-help Groups (SHGs) under that the State Rural Livelihoods Mission (SRLM). This will not only contribute to their household income but also impact WASH outcomes that are impacted by the standard of living. While P.A.C.E. program equips women with information and skills to negotiate the gender dynamics within the household, there is a need to shift the gender power relations both at the household and community level.



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# LIST OF ACRONYMS AND ABBREVIATIONS USED IN THE REPORT

<b>CAPI</b>	Computer Assisted Personal Interviewing
<b>IC</b>	Informed Consent
<b>ICRW</b>	International Center for Research on Women
<b>I4DI</b>	Institute for Development Impact
<b>IRB</b>	Institutional Review Board
<b>LG</b>	Learning Group
<b>MP</b>	Madhya Pradesh
<b>NFHS</b>	National Family Health Survey
<b>P.A.C.E.</b>	Personal Advancement & Career Enhancement
<b>SHGs</b>	Self-help Groups
<b>SLI</b>	Standard of Living Index
<b>SRLM</b>	State Rural Livelihoods Mission
<b>USAID</b>	United States Agency for International Development
<b>WASH</b>	Water, Sanitation and Hygiene
<b>W+W</b>	Women + Water Alliance



# 1 Introduction

The right to water and sanitation is recognized as fundamental to attaining all other human rights (Kayser et al., 2019). However, access to WASH (water, sanitation and hygiene) facilities continues to be poor among people living in rural areas, urban slums, disaster and conflict-ridden areas and low-income countries (Hutton and Chase, 2017; UNICEF, 2021; Ray, 2007; Baker et al., 2018; Caruso et al., 2017). According to a national level survey conducted in India, ten percent households do not have access to an improved source of drinking water,<sup>1</sup> half of the households do not use an improved toilet facility,<sup>2</sup> and 39 percent households practice open defecation (IIPS & ICF, 2017). Evidence shows that poor onsite sanitation technologies contribute to groundwater contamination (Pujari et. al., 2007; 2012; Megha et. al., 2015; Hunt & Johnson, 2017; Bhallamudi et. al., 2019). In India, a major part of the water requirement is fulfilled through groundwater sources, thus knowledge of and access to improved sanitation facilities become critical (Joshi & Amadi, 2013; Mills & Cumming, 2016; McMichael, 2019). While the Government of India launched the Swachh Bharat Mission in 2014 to increase access to toilet facility and eliminate open defecation, the need for interventions to drive behavior change has been emphasized in addition to ownership of toilets (Srinivasan et.al., 2019).

Often, unhygienic practices of water collection and storage, poor hand hygiene and limited access to sanitation facilities have implications on the health of women and children (DeNormandie & Sunita, 2002). Previous studies suggest that handwashing with soap, treating water and appropriately disposing excreta significantly reduce the risk of diarrhea (Fewtrell et al., 2005; Clasen et al., 2007; Cairncross et al., 2010). Promoting WASH behavior is also essential for improving the health and nutrition outcomes for women and adolescent girls (Das et.al., 2015; Chattopadhyay et.al., 2019).

Literature suggests that women play a significant role in managing WASH at home. For example, collecting water and cleaning and maintenance of the toilet are considered to be the responsibility of women (Ray, 2007; Keltner, 2014; Caruso et al., 2017; Geere et al., 2018). While women's role is emphasized in water and sanitation programs, social norms do not allow women to participate in decision-making (Routray, 2017), thus there is a need to involve women in decision-making for WASH-related matters (Barker et al., 2016). The Gap Inc.'s Personal Advancement & Career Enhancement (P.A.C.E.) program intends to build women's knowledge and skill for driving change in WASH behaviors and improving women's involvement in decision-making.

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<sup>1</sup> Piped into dwelling, piped into plot, public tap/standpipe, tube well/borehole, protected well, protected spring, rainwater, community RO plant.

<sup>2</sup> Flush toilet, ventilated improved pit, pit latrine with slab, twin pit/composting toilet.



## 1.1 About Gap Inc. P.A.C.E.

The global apparel industry employs millions of people throughout the world, a majority of whom are women. The global retailer, Gap Inc., represents an influential stakeholder in the apparel market and millions of lives are touched by Gap Inc.'s value chain—from growing cotton, processing and dyeing fabric, to cutting and sewing material into garments.

Despite their large numbers in the workforce, women garment workers have limited opportunities to acquire the skills to enable their professional and personal growth. In response to this need, Gap Inc. initiated the Personal Advancement & Career Enhancement (P.A.C.E.) program to equip women with the managerial, interpersonal, organizational and other practical skills needed to move forward in work and in life. P.A.C.E. is Gap Inc.'s pioneering effort in engendering women's advancement. The multi-country evaluations (Nanda et. al., 2013) demonstrated that P.A.C.E. benefitted:

- Women Workers – by improving their self-esteem by 49 percent, self-efficacy by 150 percent and work efficacy by 119 percent and by equipping them with confidence, knowledge and skills such as communication, time management, decision-making, to improve their lives and support in achieving goals for advancement at workplace.
- Garment Factories - by improving the skills and retention of the workforce
- Families and Communities- by women's learning and promotion at workplace.

The program has been effectively integrated into the existing supply chain structures which makes it effective, sustainable and scalable. After effective implementation in the workplace, the P.A.C.E. program was expanded across geographies and sectors including fishing communities, tea plantations, refugee camps and cotton-growing and textile manufacturing communities. The P.A.C.E. program was found to have impacted women's lives significantly.

## 1.2 About Women + Water Alliance

The Women + Water (W+W) Alliance aims to enhance women's agency and self-efficacy in WASH decision-making by implementing the P.A.C.E. curriculum with women in the community.

Gap Inc. and the U.S. Agency for International Development (USAID) partnered in 2017 to launch the Women + Water Alliance, a Global Development Alliance to improve the health and well-being of women and communities touched by the apparel industry. In particular, the Women + Water Alliance aims to increase access to safe water supplies and improve sanitation and hygiene practices. To achieve this goal, the W+W Alliance is implementing an adapted version of Gap Inc.'s P.A.C.E. program that includes an expanded focus on water, sanitation and hygiene (WASH) practices. The program is expected to improve WASH outcomes by supporting women graduates to:

- 1) Participate in household decision-making and expenditure prioritizing regarding WASH,
- 2) Adopt key WASH behaviors, and
- 3) Take up WASH financing products and services made available as a result of the W+W Alliance program interventions. If successful, this approach could be replicated and scaled-up in other countries that are heavily engaged in the global apparel industry to improve the health and well-being of women and their communities.

W+W's theory of change (TOC) aims to improve and sustain the health and well-being of women and communities by ensuring that key WASH practices are adopted in the community and quality resources are available, accessible and sustainably managed in the communities. On the demand side, the TOC postulates that women who undergo P.A.C.E. training will have enhanced knowledge, life skills and capacity to champion WASH, which will help them advance their agency, self-efficacy and decision-making within the household. This, in turn, will improve the household demand for improved WASH facilities.

To achieve this outcome, CARE India undertook P.A.C.E. trainings with women in Madhya Pradesh (MP) and Maharashtra. Learning groups (LGs) with a maximum of 35 women were formed after voluntary enrolment drives were conducted in villages of selected blocks across five selected districts of MP and two selected districts of Maharashtra. In each of the selected districts, P.A.C.E. trainings were conducted for women in a six-monthly cycle simultaneously. Each six-monthly batch of multiple LGs was defined as a cohort. The LGs received weekly sessions, a total of 32 sessions over a period of six months of P.A.C.E. training (Table 1.1) that completed 48 hours of curriculum.

**TABLE 1.1: P.A.C.E. Modules by Duration**

MODULES	Hours	Total Sessions
Essential: Opening	3	2
Communication	7.5	5
Problem Solving & Decision Making	9	6
Time & Stress Management	9	6
WASH	4.5	3
Financial Literacy	4.5	3
Social Entitlements	3	2
Essential: Close	3	2
WASH Financing	3	3

Those who completed 70 percent of the four core modules –Communication, Problem Solving and Decision Making, Time and Stress Management, and WASH were considered P.A.C.E. graduates.

### 1.3 Role of ICRW

As a long-standing knowledge partner of Gap Inc. on the P.A.C.E. program, the International Center for Research on Women (ICRW) conducted a longitudinal study as part of the W+W Alliance to assess the adoption and sustainability of WASH behaviors among the P.A.C.E. graduates in Madhya Pradesh, India. This report presents the findings from the impact evaluation study which was conducted in two phases—baseline in September- December, 2019 and endline in February, 2021.



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 बडी विकस कार्य  
 तबीकीकपरीशल  
 CARD  
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 - जलमेद, वर्ष-2017-18  
 डियर इण्डिया द्वारा प्रायोजित  
 केस का एडवोकेट सिच एण्ड  
 डेवेलपमेन्ट (कॉर्ड) देवस



WOMEN + WATER USAID Gap Inc.

**P.A.C.E. प्रशिक्षण**  
 Women + Water Project

मॉड्यूल का नाम PSDM सेशन नं. 01  
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## Evaluation of P.A.C.E. for Women in the Community

The W+W Alliance aimed to influence key WASH practices at the community level and improve the availability and accessibility of WASH resources, thus addressing the issues from both ends—supply and demand generation. As an Alliance partner, CARE India's role was to train women in these communities using the P.A.C.E. curriculum. ICRW evaluated the P.A.C.E. training with women as part of the community component.

### 2.1 Research Objectives

The evaluation of the P.A.C.E. program has established that it is effective in building women's knowledge, skills and ability to navigate and negotiate at home and at the workplace (Nanda et.al., 2013). However, the impact of P.A.C.E. on driving and sustaining WASH behavior is not known. This study aimed to understand how women use both WASH knowledge and the life skills that they receive from P.A.C.E. to amplify their voice and take part in decision-making in the household. Thus, the evaluation was designed to understand the influence of P.A.C.E. training outcomes such as self-efficacy, communication and involvement in decision-making on adoption and maintenance of WASH behaviors. This evaluation is expected to establish pathways through which the program activities influence household decision-making vis-à-vis uptake and sustainability of WASH behaviors and WASH financing products.

Post the baseline study, with the outbreak of COVID-19 in the year 2020, it became critical to understand the impact of the pandemic on the lives of the P.A.C.E. participants. Therefore, additional questions were added to the study tool at the time of the endline survey.

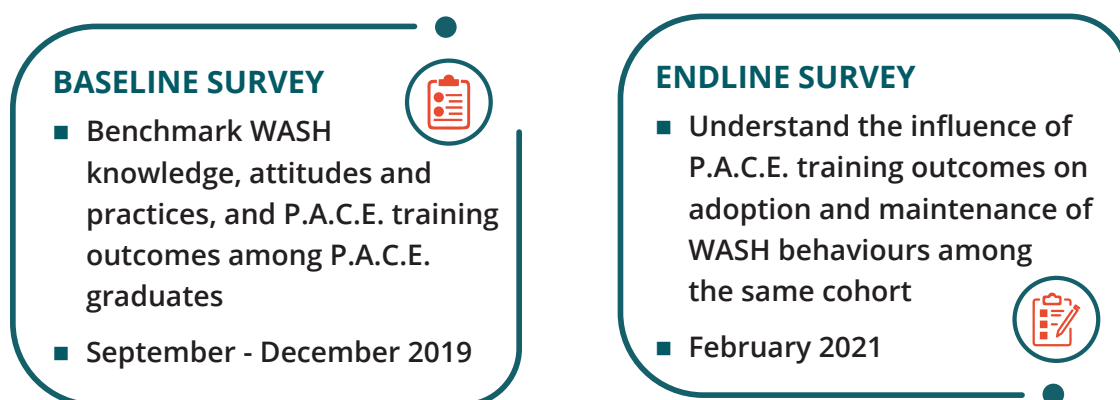
In the usual pre-post study design, the baseline survey is conducted to benchmark knowledge, attitudes and practices prior to an intervention. For this study, however, the objective was to understand the influence of P.A.C.E. training on sustenance of knowledge, track outcomes on adoption and maintenance of WASH behaviors, and how the women amplify their voice and take part in decision-making. It was decided, therefore, to conduct the first round of surveys soon after completion of P.A.C.E. training. The first round of survey (baseline) was therefore conducted between September–December 2019 with the women who graduated from the program.

The endline was conducted from February to March 2021 with the same cohort of women who participated in the baseline. It attempted to understand the sustainability of WASH behaviors adopted during or soon after the P.A.C.E. training. Initially planned to be conducted a year after graduation, the endline was delayed due to the COVID-19 pandemic.

## 2.2 Evaluation Design and Sample Size

The evaluation has used a longitudinal quantitative study design with P.A.C.E. graduates at two points of time to explore the influence of key P.A.C.E. outcomes on WASH, based on the program's theory of change. As depicted in Figure 1, a cohort of P.A.C.E. graduates was recruited at baseline (September–December, 2019) which was conducted immediately after completing P.A.C.E. training from the selected districts and the same cohort was to be followed up after one year. However, due to COVID-19, the endline was delayed by almost five months (February–March, 2021).

**FIGURE 1:** Evaluation Design



This report presents findings from the evaluation conducted with P.A.C.E. graduates in three districts—Sehore, Dhar and Khandwa—of Madhya Pradesh. To understand the impact that P.A.C.E. had on WASH behaviors and outcomes related to women's agency, information was gathered on the following quantitative outcome variables and mediating factors (Figure 2):

**FIGURE 2:** Primary and Secondary outcomes and intermediary factors included in the evaluation

### PRIMARY OUTCOMES

WASH behaviors:

- Water storage and handling
- Hand washing with soap at critical times
- Toilet use
- Menstrual hygiene management
- Financial Planning & Savings for WASH



### SECONDARY OUTCOMES

Women's involvement in decision-making to install or to secure credit to install a:

- Water connection in the household
- Water filter in the household



### INTERMEDIARY FACTORS

- Household composition/ type of family
- Women's involvement in decision-making
- Standard of living
- Communication with family members
- Access to water
- Availability of water
- Access to toilet
- Availability of toilet
- Attitude towards toilet in the household



Since the study focused on adoption and sustainability of WASH behaviors, the primary and secondary outcomes are linked to water storage and handling, hand washing, toilet use, menstrual hygiene and WASH financing. Based on literature, it was also observed that women's involvement in decision-making, their access to WASH facilities and economic condition are associated with adoption of correct WASH behavior (Barker et al., 2016; Routray, 2017; Hutton & Chase, 2017). Thus, the mediating factors also become critical to understand the pathways to adoption and maintenance of WASH behaviors. The study first examined women's access to WASH facilities and their involvement in decision-making both at baseline and endline. In the next step, the study examined association of self-efficacy, self-assertive efficacy and other socio-economic characteristics of women with sustained WASH behavior through multivariate analysis.

## 2.3 Selection of Districts

Three districts of Madhya Pradesh (MP)—Sehore, Dhar and Khandwa—were selected based on a comparative analysis of key demographic and gender indicators from Census 2011 data and WASH-specific indicators from the baseline study conducted by the Institute for Development Impact (Lee & Nurkic, 2018). For details on selection of districts, please refer to Annexure 1.

## 2.4 Sample Size Calculation

The baseline sample was calculated by using the indicator 'correct handwash practice'<sup>3</sup> from the W+W baseline report developed by I4DI for each of the three selected districts. This sample size was designed to detect a 10 percent change from baseline to endline and also assumed a 20 percent loss to follow-up at the time of the endline survey. The following formula was used to calculate sample size, which is based on two-sided Confidence Interval (CI):

$$n = \frac{Z_{\alpha/2}^2 [\pi(1 - \pi_1) + \pi_2(1 - \pi_2)]}{d^2}$$

Where:

n – required sample size

$Z_{\alpha/2}$  – 95 percent confidence interval (1.96)

$\pi_1, \pi_2$  , – anticipated value of the indicator (correct hand wash practice) in Phase 1 and Phase 2

$d^2$  – anticipated change in proportions due to interventions (10 percent)

<sup>3</sup> Washing hands each time with soap after the following five key activities: after defecation, before cooking, before eating, before feeding child, after disposing child feces.

The required sample size in each district is given in Table 2.1 below:

**TABLE 2.1:** Sample Size for the Three selected districts of Madhya Pradesh

	Dhar	Khandwa	Sehore
<b>Total Women</b>	6,297	3,268	3,735
% reported correct handwashing practice at baseline	62.66	53.69	77.78
Required sample	346	378	220
Sample including 20% for loss to follow-up	415.2	453.6	264

Based on the sample size estimations, 500 women per district were enrolled; a total of 1,500 women participated in the baseline survey.

## 2.5 Sampling Procedure

A random sample of 1,500 women in MP who completed at least 70 percent of the core and WASH modules of the P.A.C.E. curriculum—Opening, Communication, Problem Solving and Decision Making, Time and Stress Management, WASH and WASH financing—from the three intervention communities was selected (Table 2.2) and recruited to participate in the longitudinal cohort.

**TABLE 2.2:** Inclusion Criteria

Baseline	Endline
1) Adult women >18 years of age	Women who participated in the baseline survey
2) Completed 70% of P.A.C.E. core modules	
3) Planned to stay in the area for the next 12 months	

## 2.6 Response Rate, Sample Achievement and Challenges Faced during Data Collection

A total of 1,427 women were interviewed at the baseline (Table 2.3). Out of these women, the research team could locate 1,421 women for the endline, through the pre-mapping exercise (Annexure 2). The main survey team interviewed 1,280 women for the endline, which is 89.6 percent of the respondents. The main reasons for non-availability of women for the interview included migration (moved to another place after marriage, with family, for studies or for work), temporarily out of station, not available before 8 pm, refusal to participate and inability to locate the respondent.

**TABLE 2.3:** Sample Coverage

Sample Coverage	Total Participants	Pre-mapping Completed	Interviews Completed
Total	1,427	1,421	1,280 (89.6%)
Dhar	473	469	417
Khandwa	457	456	418
Sehore	497	496	445

## 2.7 Recruitment and Consent Process

For the baseline survey, women were randomly selected from the list of participants who attended 70 percent of the core and WASH modules. The contact details of only the selected women



were shared by CARE to enable the research team to recruit them for the study. Only after the women expressed their interest in participating in the study, a detailed consent form was used to seek their agreement for participation in both baseline and endline surveys. Only those who agreed to participate in both the rounds of study were interviewed. All the respondents who participated in the baseline and consented for the endline were recruited for the endline survey.

All the documents including the recruitment form, consent form and the tool for both baseline and endline were approved by the Institutional Review Board (IRB). All the study tools were translated into Hindi, tested and finalized through a pilot study.

## **2.8 Training, Field Implementation and Monitoring of Data Collection**

The research team was trained in ethical guidelines, study tools and consent forms using classroom-based training and field-based practice before initiating field work. Additionally, a session on COVID-19 protocol was included at the time of the endline survey (Annexure 2).

To ensure good quality data, Quality Assurance (QA) consultants were trained to monitor the field work throughout the data collection period and provide the requisite support to the field teams in consultation with the research team.

A real-time dashboard was also set up for remote monitoring of the daily progress of data collection. The status of each interview was updated in the dashboard. Cumulative numbers at the level of the district, block and village—depicting total interviews completed, refusals, number of women reached and consent taken for interview, duration of the interview and respondent-wise status—were available for real-time monitoring.

## **2.9 Data Analysis**

This report presents the analysis on the key outcome indicators that the program intended to improve. The data was analyzed using STATA 15 after the baseline and endline data was merged. The mean scores of indicators were compared between baseline and endline. Various composite indices were computed to undertake the analysis (Annexure 4).

In addition, regression analysis was conducted, controlling for background characteristics such as age, education, caste, marital status and standard of living to examine the influence of P.A.C.E. training outcomes—self-efficacy, self-assertive efficacy, communication, involvement in decision-making—on sustained WASH behaviors. Factors associated with P.A.C.E. training outcomes, such as decision-making especially vis-à-vis WASH related matters, were also examined.

Before initiating a detailed data analysis, the characteristics of attrition sample with the baseline sample were examined to understand who were being left out of the endline survey. The distribution of respondents by background characteristics at the time of endline remained the same as baseline. The sample differs significantly only on age and marital status at the time of endline, which was expected since the endline survey was conducted after a gap of over a year. The analysis of the attrition sample confirmed that attrition was uniform and did not impact any group disproportionately.



## 3 Findings from the Evaluation Study

This section presents the findings from the evaluation of the P.A.C.E. component. As explained earlier, this study aimed to understand how women use the WASH knowledge and life skills that they receive from P.A.C.E., to amplify their voice and take part in decision-making in the household. It is critical to remember that the baseline was conducted immediately after the completion of P.A.C.E. training, while the endline was conducted after more than a year. During this period, the community experienced the COVID-19 pandemic and related restrictions such as lockdown and social distancing. The findings therefore, must be contextualized within a setting where P.A.C.E. participants did not have the support of the program team nor of their peers or community members to help them maintain the awareness and practices that they may have cultivated during the P.A.C.E. training. While adoption of behavior requires knowledge and change in attitudes along with access to services, maintenance of behaviors in the long term is far more difficult, especially in the absence of any supportive strategies.<sup>5</sup> This implies that a decline in most of the indicators since the baseline survey was expected. However, ‘no decline’ could be interpreted as sustaining the behavior. Although the sample size was estimated at district level, this report presents results for the three study districts together at baseline and at endline.

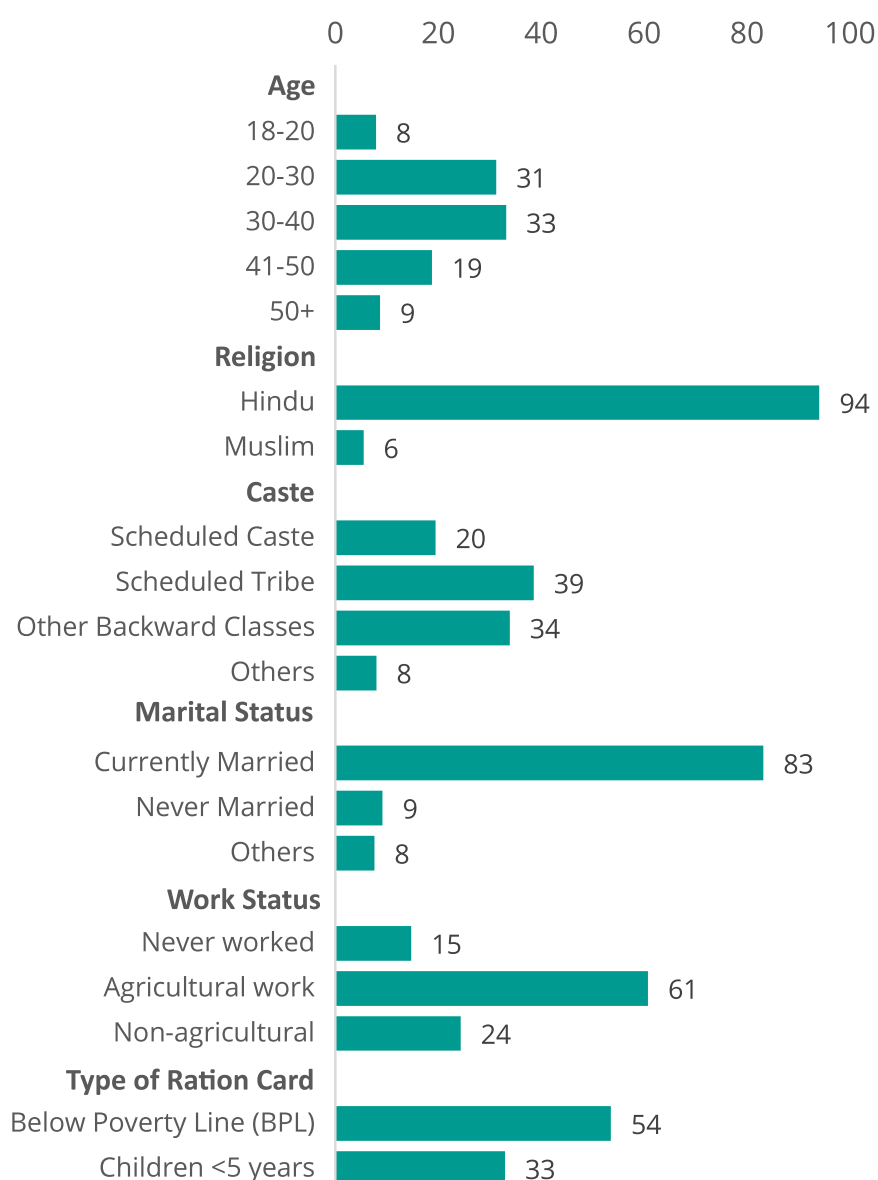
### 3.1 Socioeconomic and Demographic Characteristics of Respondents

The women who participated in the baseline survey were followed for the endline survey. Figure 3.1 presents the socio-economic profile of respondents from endline survey. More than 60 percent of the women in the sample were in the age group of 20–40 years and the majority (94 percent) were Hindu. More than one-third women belonged to scheduled tribe and other backward classes, and one-fifth to the scheduled castes. More than 80 percent of the women are currently married, nine percent never married, and eight percent were either widowed, divorced or separated. The majority (61 percent) of the respondents were engaged in agriculture, almost one-fourth were engaged in non-agricultural activities and the remaining 15 percent have never worked to earn. More than half of the respondents belong to the BPL (below poverty line) category. This implies that the P.A.C.E. program reached women from the most marginalized groups. A comparison of socioeconomic and demographic characteristics of the respondents who participated in baseline and endline surveys is shown in Annexure 3.

<sup>4</sup> <https://sbccimplementationkits.org/service-communication/case-studies/case-study-behavioral-maintenance-and-follow-up-in-bangladesh/>



**FIG. 3.1:** Socioeconomic Profile of Respondents (%)



Due to the COVID-19 pandemic, the endline survey had to be replanned after the situation improved considerably and government regulations allowed inter- and intra-state travel. This delayed the survey by almost five months, but also created an opportunity for the W+W Alliance to get insights into how COVID-19 impacted the life of P.A.C.E. participants. A few additional questions were included in the endline questionnaire to understand the impact of COVID-19 on women's time use, access to WASH facilities, their self-efficacy and involvement in decision-making.

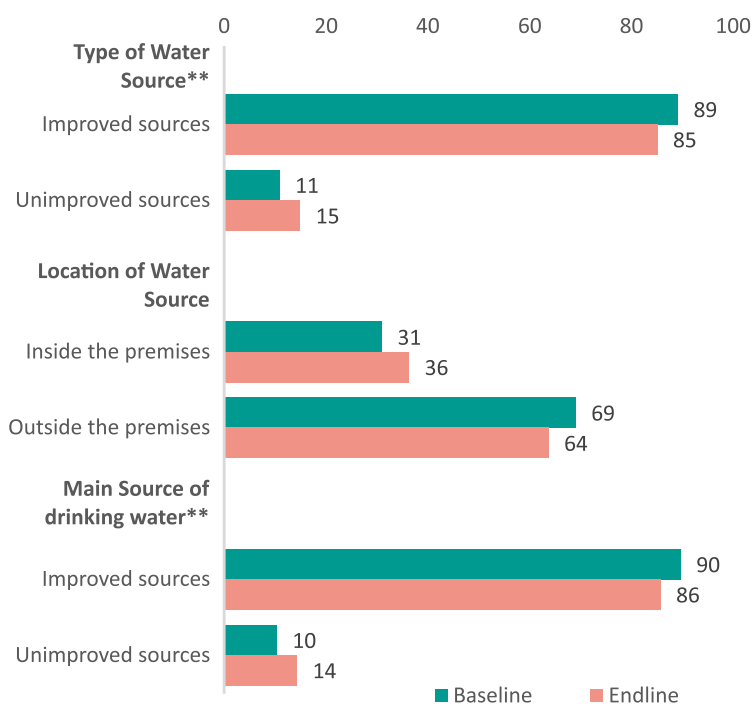




### 3.2 Water Storage and Handling Practices

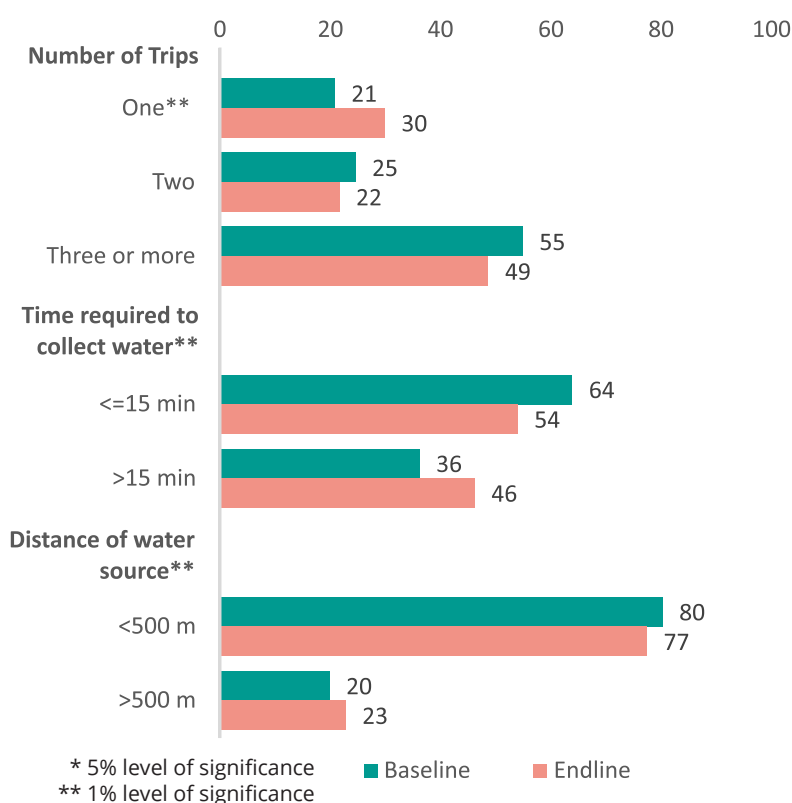
At the time of the baseline survey, 89 percent of the respondents had access to improved sources of water. This had reduced to 85 percent (statistically significant) at the time of the endline (Fig. 3.2). The reasons for this decline were not captured in the survey, but a detailed analysis of different improved and unimproved sources reveal that women's access to piped water (piped into dwelling/plot and public tap) reduced from baseline (68 percent) to endline (62 percent). A higher percentage of respondents collected water from unprotected wells at endline (12 percent) than baseline (8 percent). This was not anticipated, and the survey did not capture the reasons for the same. However, it is critical to understand that access to improved sources of water is impacted by local conditions, including weather and infrastructure.

**FIG. 3.2:** Source and Location of Water (%)



\*\* : 1% level of significance, \* : 5% level of significance

**FIG. 3.3:** Number of Trips, Time and Distance for Collecting Water (%)



While the proportion of women accessing improved water sources dropped, a significantly higher proportion of women reported only one trip per day to collect water at the endline. 30 percent women reported collecting water in one trip per day at endline as compared to 21 percent at baseline (Fig. 3.3). However, significantly more women (23 percent) were collecting water from a source more than 500 meters away from their home at endline compared to baseline (20 percent). Percentage of women who take more than 15 minutes on an average to collect water has also increased to 46 percent at endline (36 percent at baseline).



This implies that the overall accessibility to water has deteriorated since baseline. To understand whether there was any link between poor accessibility and the COVID-19 pandemic, it was important to further examine women's access to water during the pandemic. 46 percent women reported that they have had to increase the number of trips to collect water since the COVID-19 pandemic.

**TABLE 3.1:** Average Time Taken to Collect Water in a Day (in Minutes)

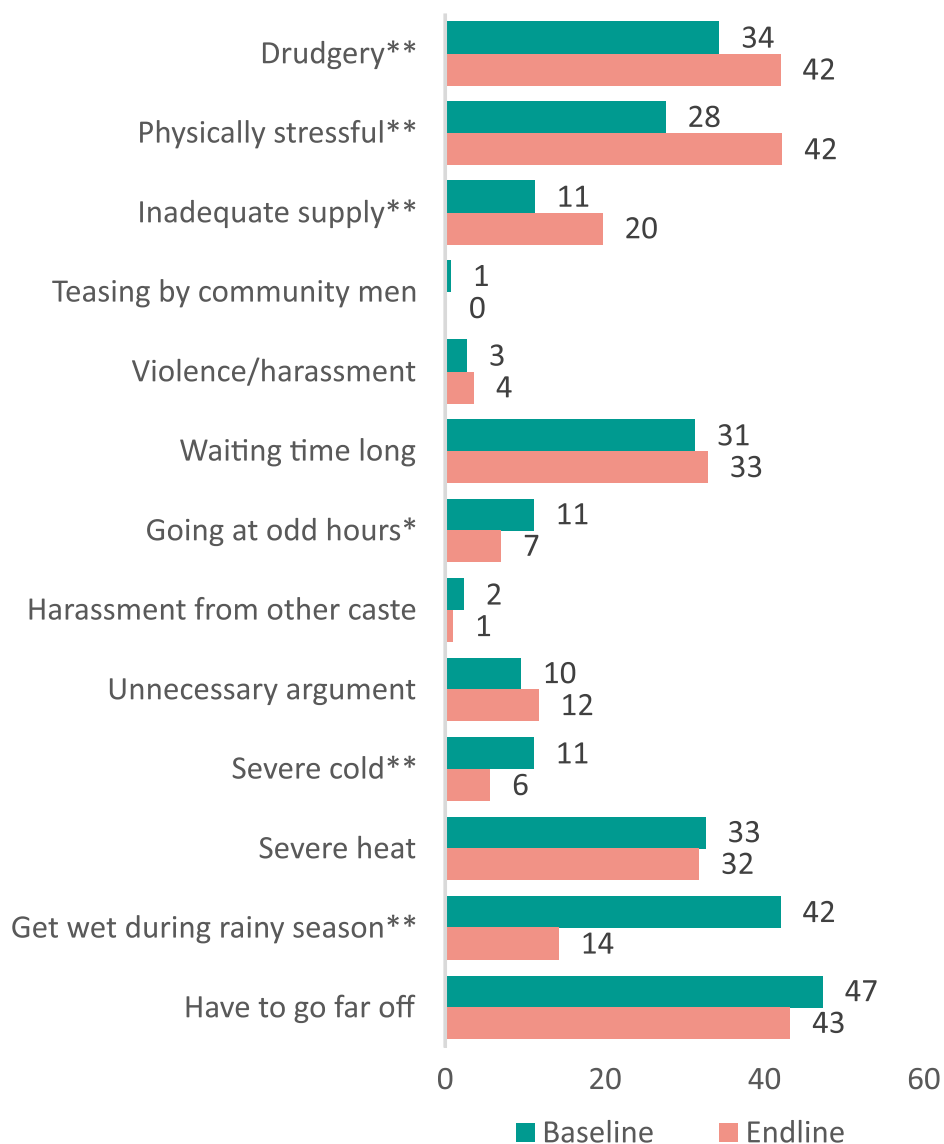
Number of trips to collect water in a day	Baseline	Endline
	Average time to collect water in a day (minutes) (N=993)	Average time to collect water in a day (minutes) (N=815)
One trip	18	22
Two trips	39	50
Three or more trips	86	101
<b>Overall</b>	<b>60</b>	<b>66</b>

Table 3.1 presents the average time taken to collect water at baseline and endline segregated by number of trips reported by women. Average time to collect water in one trip increased from 18 minutes (baseline) to 22 minutes (endline). Similarly, average time to collect water in two trips increased from 39 minutes to 50 minutes and for three or more trips, time increased from 86 minutes at baseline to 101 minutes at endline. The average time to collect water therefore changed from 60 minutes at baseline to 66 minutes at endline.

Further analysis showed that the average household size had increased for women who reported an increase in number of trips. This could possibly be because of the increase in the number of family members who were home due to the COVID-19 lockdown.

Respondents were asked about the difficulties they faced while fetching water (Fig. 3.4). The proportion of respondents reporting drudgery increased from 34 percent to 42 percent and those reporting physical stress increased from 28 percent to 42 percent. One-fifth of the respondents reported inadequate water supply at endline, which is also higher than baseline (11 percent).

**FIG. 3.4:** Difficulties Faced in Collecting Water (%)

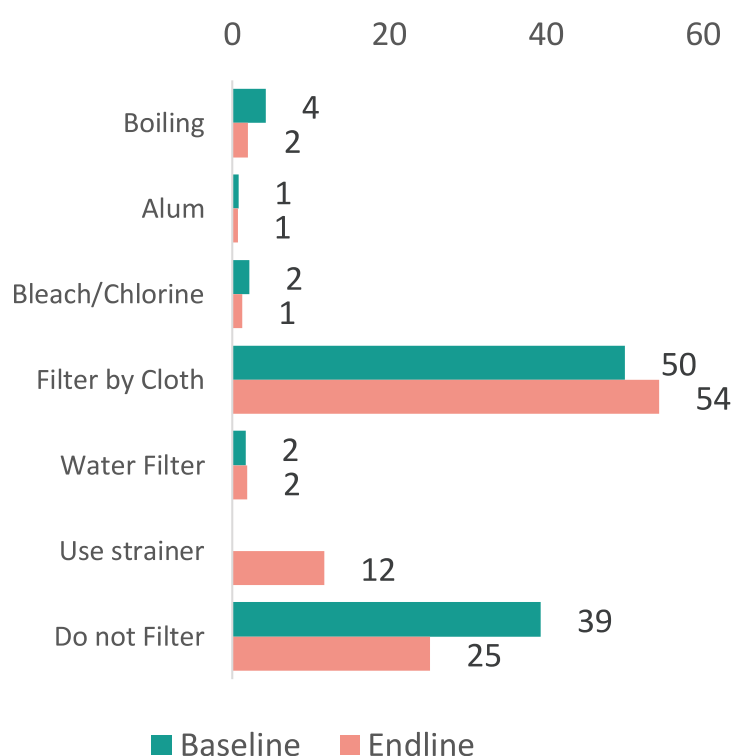


\*\* : 1% level of significance, \* : 5% level of significance

20 percent women reporting inadequate supply of water could also explain the decline in the proportion of women accessing improved sources of water and access to piped water.

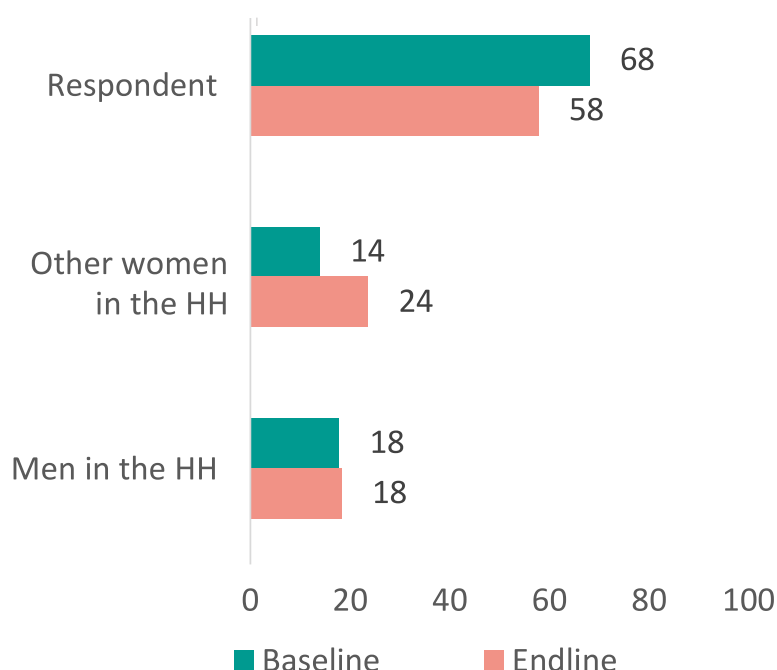


**FIG. 3.5:** Type of Filter used for Drinking Water\*\*



\*\* : 1% level of significance, \* : 5% level of significance

**FIG. 3.6:** Main Person to Collect Water\*\*



\*\* : 1% level of significance, \* : 5% level of significance

At the endline, a significantly higher proportion of women (75 percent) were using a filter for drinking water. However, more than half of these respondents continue to use cloth as filter (Fig. 3.5). At the endline, 12 percent women specified using a strainer to filter water.

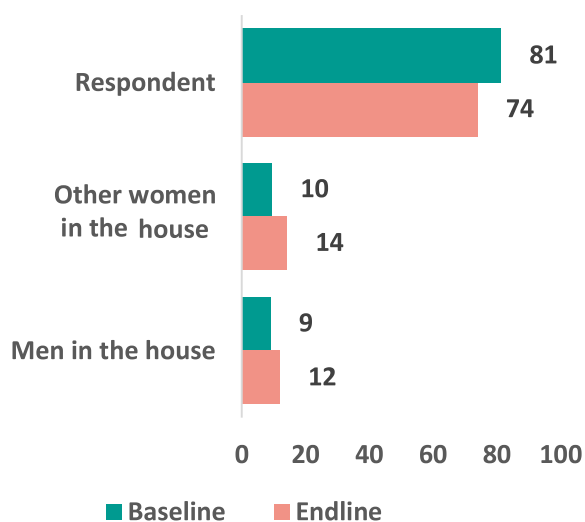
During the baseline, which was conducted soon after the respondents completed P.A.C.E. training, 82 percent women (Fig. 3.6) reported that the main responsibility of collecting water lay either with them or with other women members of the household. The percentage of women responsible for collecting water did not change at endline (82 percent). However, the proportion of respondents collecting water did reduce at endline as a greater proportion of other women in the household seem to be shouldering the responsibility.

Apart from fetching water, women were also responsible for taking water-related decisions in the household, such as decisions on how much water is required for daily household needs, the main source of drinking water, assigning the responsibility of collecting and filtering water and the type of water filter to be used. Figures 3.7 to 3.11 present how women (both the respondent and the other women in the household) continue

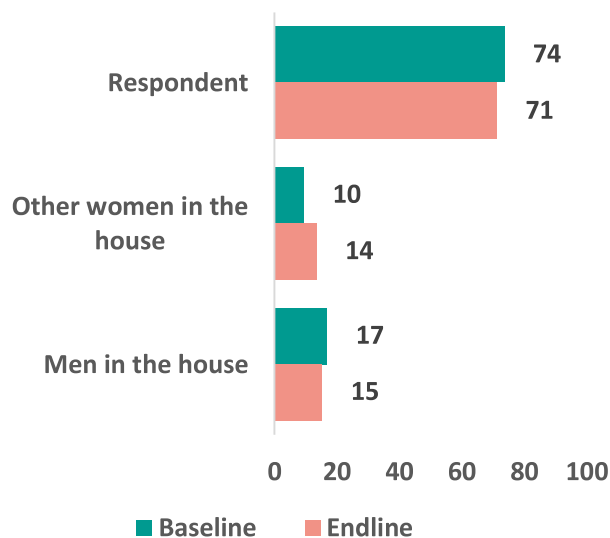


to bear the responsibility of taking decisions related to water collection and management. More than 70 percent of respondents reported taking decisions on all aspects of water collection and management, which is significantly lower than the percentage of respondents at baseline. However, the responsibility seems to be shifting on to the other women in the household.

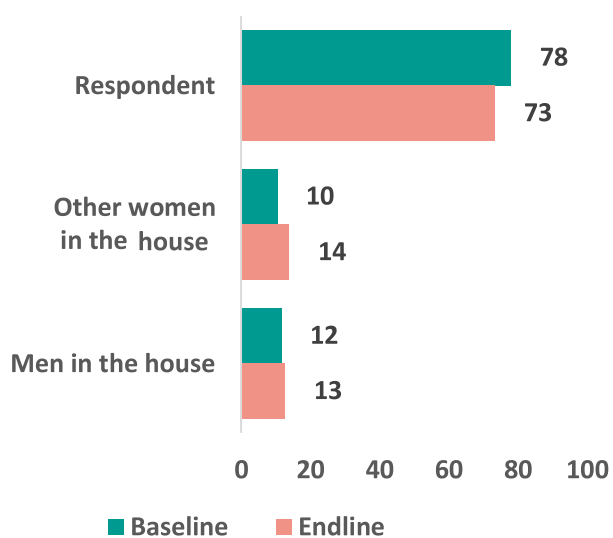
**FIG. 3.7:** Decision on Amount of Water Required Daily (%)\*\*



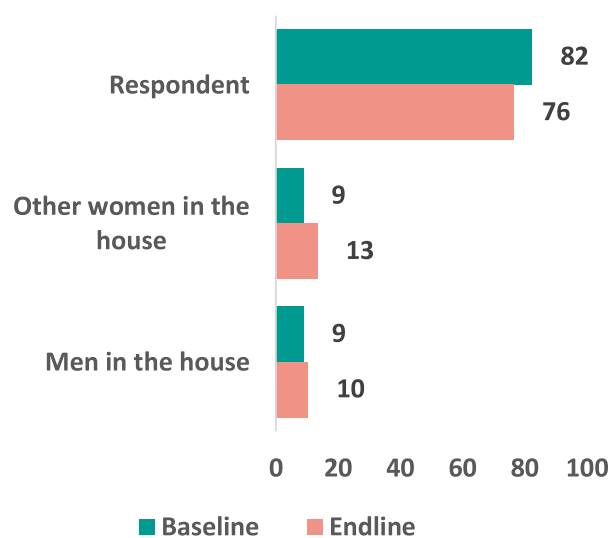
**FIG. 3.8:** Decision on Main Source of Drinking Water (%)\*\*



**FIG. 3.9:** Decision to Assign Responsibility of Collecting Water (%)\*\*

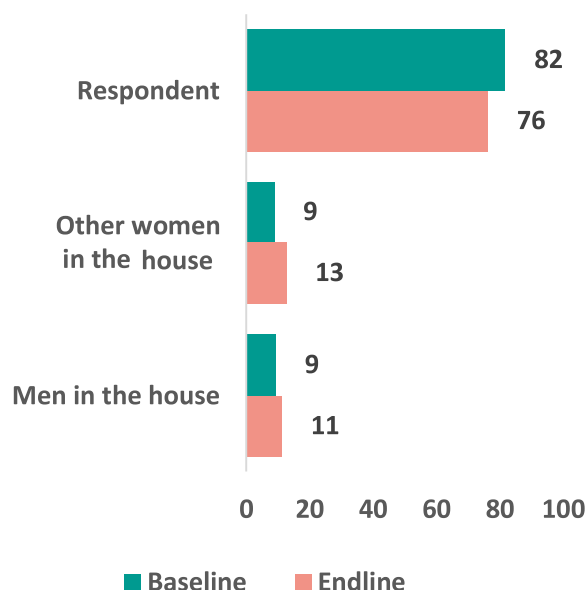


**FIG. 3.10:** Decision on Type of Water Treatment (%)\*\*

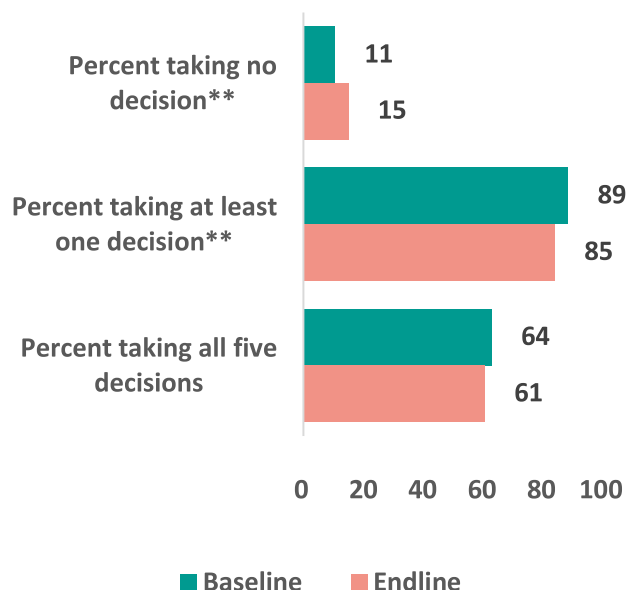


\*\* : 1% level of significance, \* : 5% level of significance

**FIG. 3.11:** Decision to Assign Responsibility of Filtering Water (%)\*\*



**FIG. 3.12:** Women taking No Decision, at least One Decision and all Five Decisions (%)



\*\* : 1% level of significance, \* : 5% level of significance

To understand if there has been a significant shift in women's responsibility vis-à-vis water collection and management, an index was constructed. Figure 3.12 shows that a significantly higher proportion of women were not taking any water-related decisions at endline (15 percent) compared to baseline (11 percent). Similarly, the percentage of respondents taking at least one decision has also reduced from baseline (89 percent) to endline (85 percent).

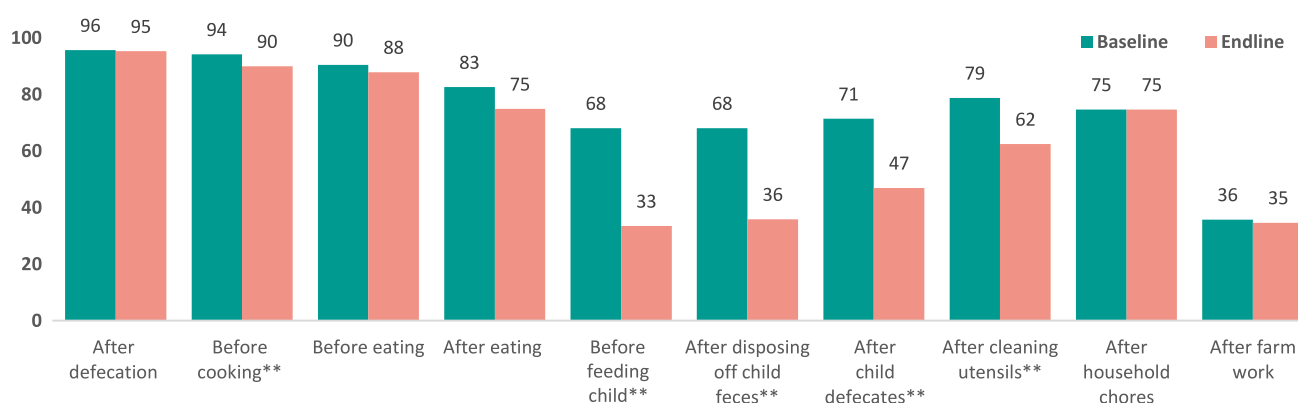
The analysis indicates that P.A.C.E. participants are able to negotiate either shifting or sharing the responsibility of collecting and managing water with other women in the household. However, men are still not sharing this responsibility within the household.

### 3.3 Handwashing Practices

Promoting handwashing practices and educating people to maintain hand hygiene is understood to be the easiest method to reduce infections including childhood diseases like diarrhea (Center for the Advancement of Health, 2008; Ejemot-Nwadiaro et.al., 2015; Solomon et.al., 2021). Handwashing is also one of the key focus areas of the P.A.C.E. curriculum. The study explored handwashing practices, including frequency and agent used for select activities; after defecation, before cooking, before eating, after eating, after cleaning utensils and after household chores. For the households that reported having children below five years of age, handwashing practices before feeding the child, after disposing off child feces and after the child defecates were also examined.

For most of the activities, a lower percentage of women reported washing hands at endline compared to baseline (Fig. 3.13). The percentage of respondents washing hands before cooking reduced significantly from 94 percent to 90 percent. Similarly, the percentage of women washing hands after cleaning utensils also reduced significantly from 79 percent to 62 percent.

**FIG. 3.13:** Percentage Reporting Handwashing after the Following Activities

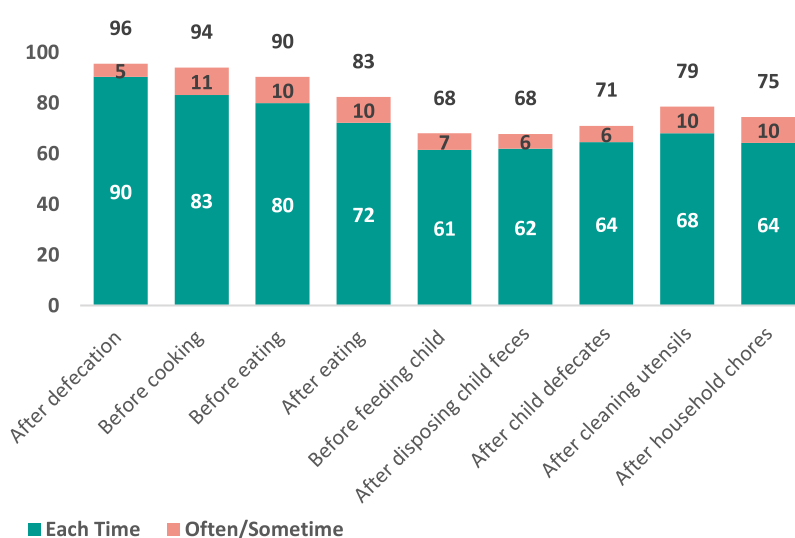


\*\* : 1% level of significance, \* : 5% level of significance

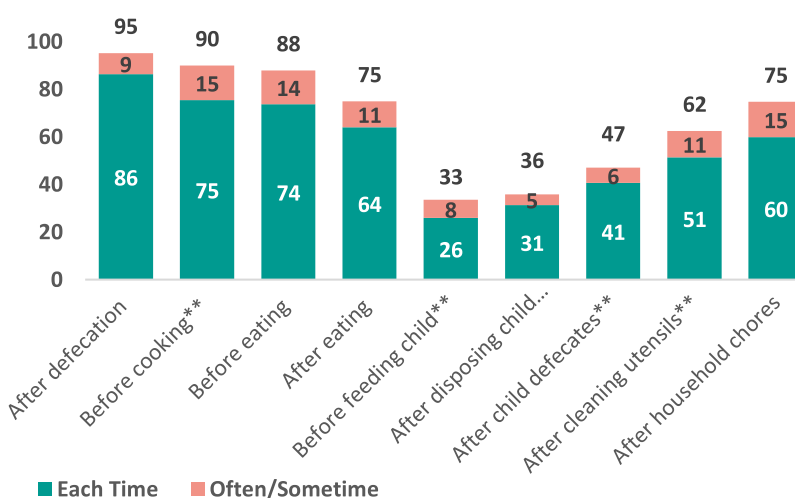
The most striking decline was observed for activities related to child fecal management. Only slightly higher than one-third respondents reported washing hands after disposing off child feces at endline, which reduced drastically from 68 percent at baseline. Washing hands after the child defecates also reduced from 71 percent at baseline to 47 percent at endline. Only one-third respondents washed hands before feeding the child at the endline as against 68 percent at baseline. It is important to note that in the absence of any support, the decline in indicators was expected.

For all the activities where the respondent mentioned washing hands, a follow-up question was asked to gauge the frequency of washing hands. An overall decline was observed in the frequency of washing hands for several activities at the endline as compared to baseline (Figs. 3.14 and 3.15).

**FIG. 3.14:** Frequency of Handwashing after each Activity at Baseline (%)



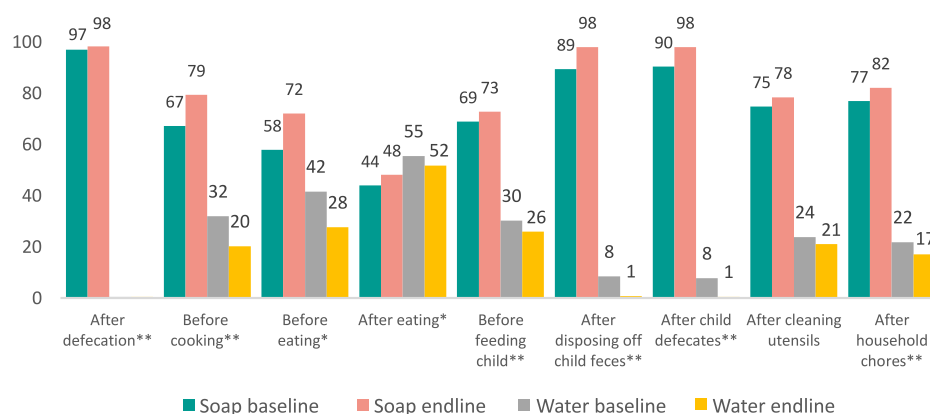
**FIG. 3.15:** Frequency of Handwashing after each Activity at Endline (%)



\*\* : 1% level of significance, \* : 5% level of significance

A significant decline in percentage of respondents washing hands each time was recorded for: before cooking (75 percent at endline, 83 percent at baseline), before feeding the child (26 percent at endline, 61 percent at baseline), after disposing off child feces (31 percent at endline, 62 percent at baseline) and after the child defecates (41 percent at endline, 64 percent at baseline). Handwashing after defecation and before eating also saw a decline but these differences are not statistically significant.

**FIG. 3.16:** Handwashing with Soap or only Water (%)



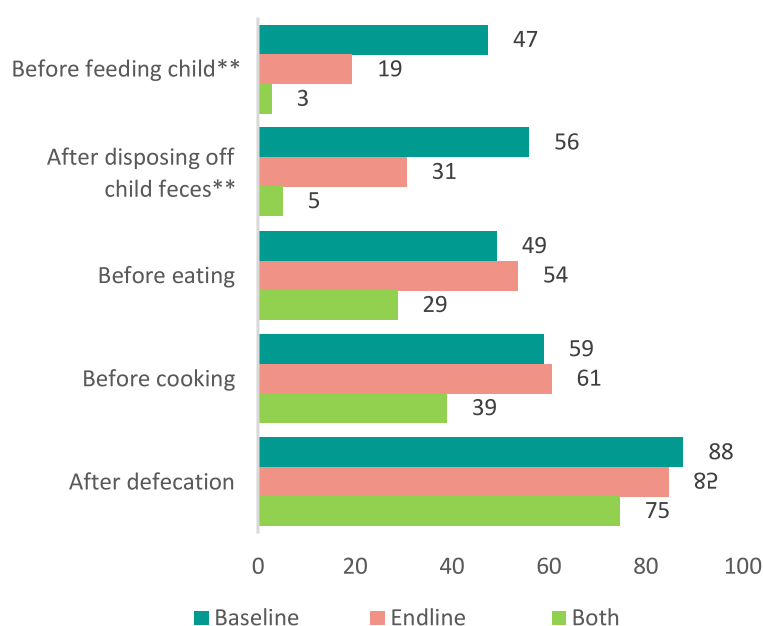
\*\* : 1% level of significance, \* : 5% level of significance

The respondents who reported washing hands each time, often or sometime after the listed activities were asked another question on the agent (soap or only water) used for washing hands. Fig. 3.16 presents the percentage of respondents who washed hands each time/often/sometimes

with or without soap at baseline and endline. While the frequency of handwashing at endline dropped, handwashing with soap increased significantly among those who reported washing hands. Since the endline was conducted after the first wave of COVID-19 in India, it is possible that the information shared on the importance of handwashing with soap as a preventive measure for COVID-19 may have impacted the increase in uptake.

Further analysis revealed that a higher percentage of respondents reported washing hands with soap each time after defecation, before cooking and before eating during endline than baseline. At the same time, a significantly lower percentage of respondents reported washing hands with soap each time after disposing off child feces and before feeding the child at endline than baseline (Fig. 3.17). To understand the sustenance of handwashing behavior among P.A.C.E. participants, the percentage of respondents who reported washing hands with soap each time after these selected

**FIG. 3.17:** Handwashing each time with Soap (%)



\*\* : 1% level of significance, \* : 5% level of significance



activities both at baseline and endline, was also analyzed. Three-fourth of the respondents reported washing hands with soap each time after defecation during both the surveys (baseline and endline), 39 percent and 29 percent respondents reported washing hands with soap each time before cooking and before eating respectively during both baseline and endline. Only five percent and three percent respondents reported washing hands with soap each time after disposing off child feces and before feeding the child respectively during both baseline and endline surveys.

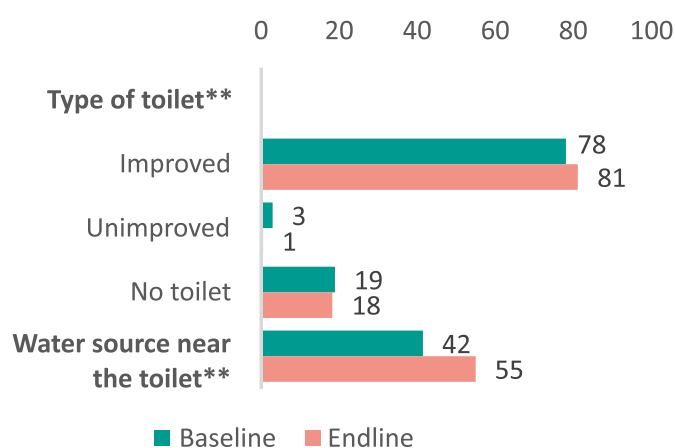
To measure the correct handwashing practice among the respondents, a composite index was constructed based on the frequency and use of soap for handwashing after five key activities – after defecation, before cooking, before eating, after disposing off child feces and before feeding the child. Overall, correct handwashing practice declined from nine percent at the baseline to three percent at endline, mainly because of the significant decline in percentage of respondents who reported washing hands with soap each time for two activities: after disposing off child feces and before feeding the child.

At this point, it is also important to recall that the availability of piped water reduced significantly and the average time to collect water increased significantly, which could have impacted the frequency of handwashing. Additionally, it is important to explore further the barriers to maintenance of behaviors, as various factors including access to water and resources, sustained messaging and supportive environment and access to resources impact handwashing (USAID, 2017).

### 3.4 Toilet Use and Maintenance

Access to improved toilets increased significantly at the endline but the percentage of respondents with no access to any toilet facility remained the same (Fig. 3.18). A significantly higher percentage of respondents (55 percent at endline, 42 percent at baseline) reported availability of water near the toilet. The common sources of water near the toilet reported during both baseline and endline, included taps inside and outside the toilet or water from hand pumps or wells. At the time of the endline, respondents reported a few other ways to manage water. These included keeping a vessel full of water (22 percent) and keeping the tank full (nine percent).

**FIG. 3.18:** Type of Toilet and Availability of Water Source Near Toilet (%)



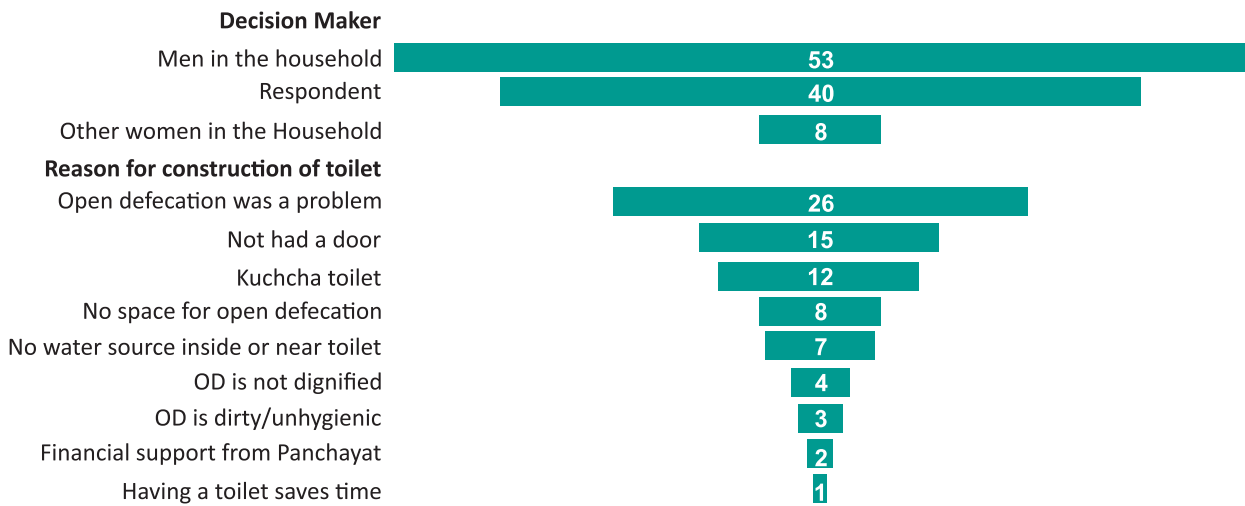
\*\* : 1% level of significance, \* : 5% level of significance

The respondents who reported no access to toilet facilities at both the surveys were found to have some common characteristics. Three-fourth of these respondents work in the agricultural sector, more than half have never attended school, 63 percent belong to a low standard of living group and nearly two-third have a below average self-efficacy and self-assertive efficacy score.

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While 42 percent of respondents reported taking the decision to construct toilets in their household at baseline, only 34 percent claimed the same at the endline. Among these, only 14 percent were common i.e., those who took the decision at both baseline and endline. While at the baseline, 15 percent claimed to have constructed or modified a toilet in the past one year, 12 percent constructed or modified the toilet despite the lockdown. However, among those who constructed or modified the toilet since baseline, more than half (53 percent) reported that the decision was taken by men (Fig. 3.19) and only 40 percent women took this decision at the endline ).

**FIG. 3.19:** Decision-maker to Construct or Modify the Toilet and Reason for Construction in Past 1 Year at Endline

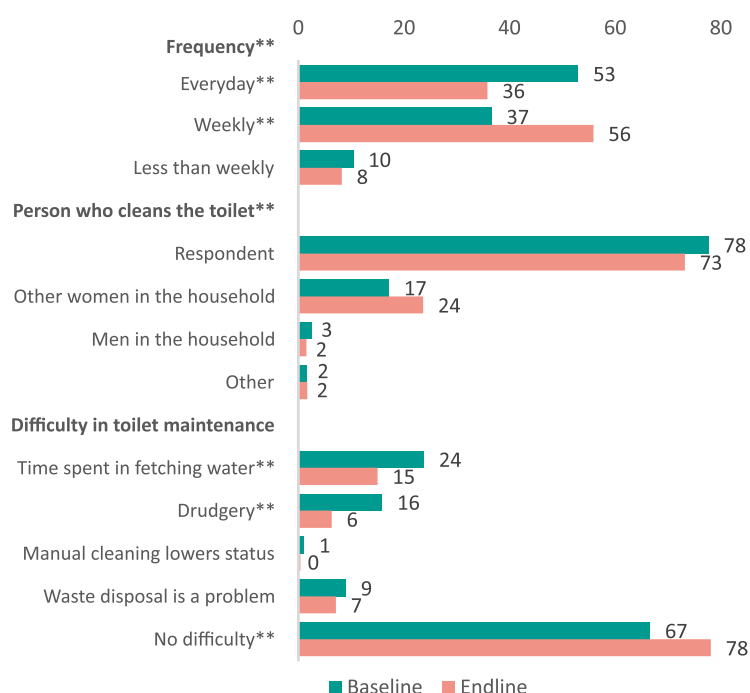


Since the survey was conducted almost 15 months after the P.A.C.E. training during which COVID-19 and related restrictions impacted lives immensely, it is important to explore whether the decline in women’s involvement in decision-making was due to lack of collective support or due to the presence of male family members at home during this period.

Problems faced in open defecation, absence of a door in the toilet and *kuchcha* toilets were cited as the major reasons for construction or modification of the existing toilet.



**FIG. 3.20: Maintenance of Toilet (%)**



\*\* : 1% level of significance, \* : 5% level of significance

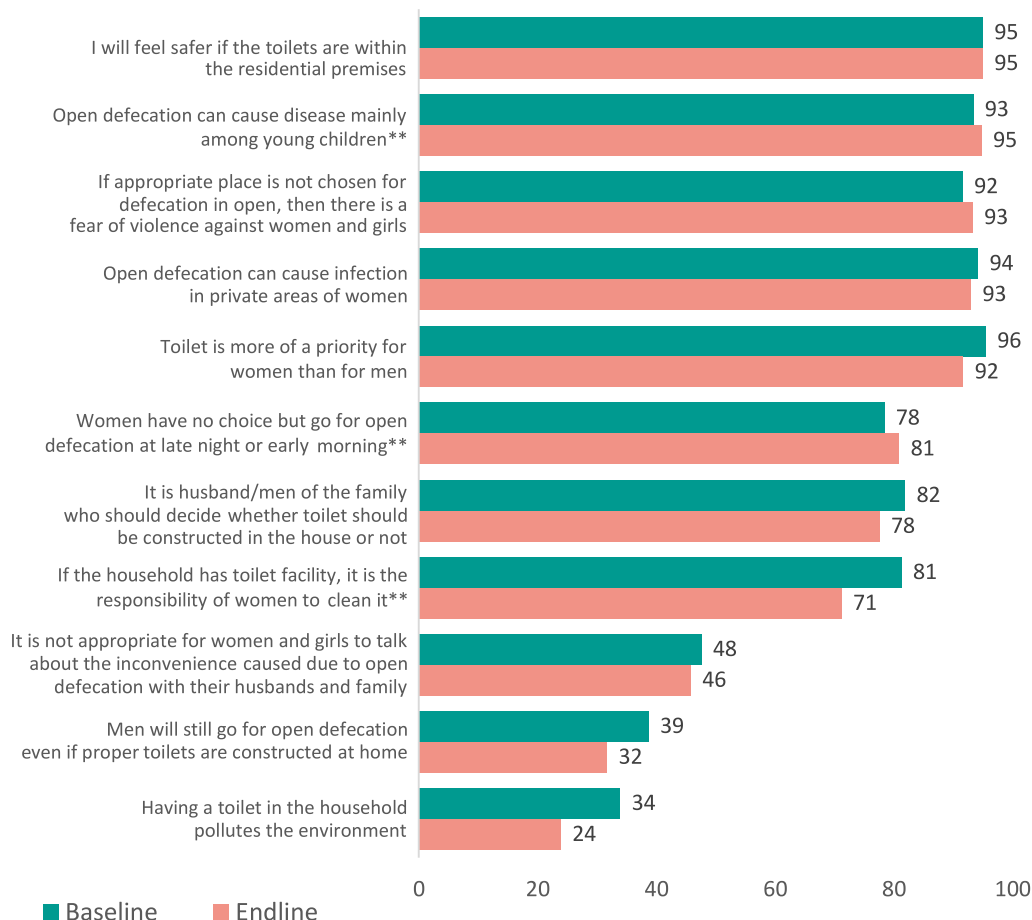
While less than half of the women were involved in the decision-making regarding construction or modification of the toilet, the majority of women (97 percent) are responsible for its cleaning and maintenance (Fig. 3.20). At baseline, 78 percent of the respondents used to clean the toilet. This has reduced to 73 percent at endline. Whereas 17 percent of other women used to clean the toilet at baseline, this has increased to 24 percent at endline.

Similar to the observations regarding responsibilities related to water, respondents seem to be shifting or sharing the responsibility with other women in the household but not with men.

### 3.5 Attitude of Women Towards Toilets and Defecation

The study examined the attitude of women towards toilet use and maintenance in the house, using 11 scale statements on a 3-point scale. More than 90 percent of the respondents agreed

**FIG. 3.21: Percentage of Women Agreeing to the Following Statements**



\*\* : 1% level of significance, \* : 5% level of significance

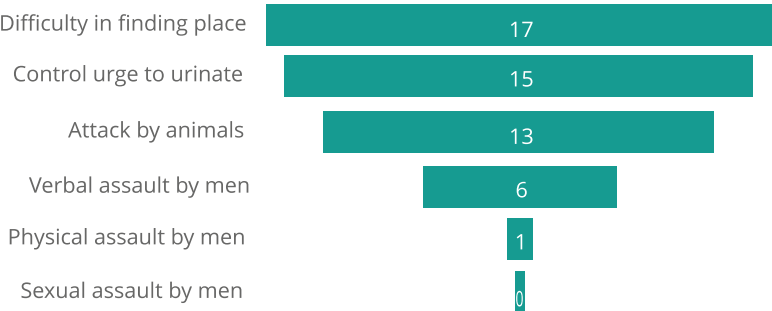
that the toilet is more of a priority for women than men. Respondents also agreed that they feel safe if the toilet is within the premises, and that open defecation can cause disease and infection, and creates fear of violence against women and girls (Fig. 3.21).

A significantly higher proportion of women agreed that open defecation causes diseases among young children (95 percent at baseline and 93 percent at endline). Similarly, a higher percentage of respondents also agreed that women who go for open defecation do not have a choice other than to go late at night or early morning (78 percent, baseline and 81 percent, endline). A significantly lesser percentage of respondents agreed that cleaning the toilet is the responsibility of women alone (81 percent baseline, 71 percent endline). This indicates that women not only have a greater understanding about the need to have and use toilets, but also realize that cleaning a toilet is not only women’s work.

At the endline, only 24 percent of respondents agreed that having a toilet in the household pollutes the environment as compared to 34 percent at baseline. There is also a decline in the percentage of respondents agreeing that male members should take the decision to construct a toilet in the household (82 percent at baseline and 78 percent at endline). The majority of women understand that open defecation can cause disease among children (95 percent baseline and 93 percent endline). Nearly half of the respondents (baseline and endline) believe that women should not talk about the inconvenience faced during open defecation with their husband and family. The findings demonstrate increase in awareness among women about the problems associated with open defecation along with a gradual shift in selected gender attitudes.

Women who did not have access to toilet facilities (i.e., had to go for open defecation or use public toilets) reported similar difficulties both at baseline and endline. More than half the respondents faced difficulties like finding space, going at night, fear of being attacked by insects or animals, feeling shame when men pass by and difficulty in going out in the monsoon. The same respondents were also asked if they faced any problem during the pandemic (Fig. 3.22). Some of the respondents reported that they faced difficulty in finding a place for open defecation (17 percent) and had to control the urge to urinate or defecate (15 percent). However, women could not raise these concerns within their family due to shame, fear of blame, fear of conflict, fear of social ostracization, lack of confidence or even lack of safe space or a confidant.

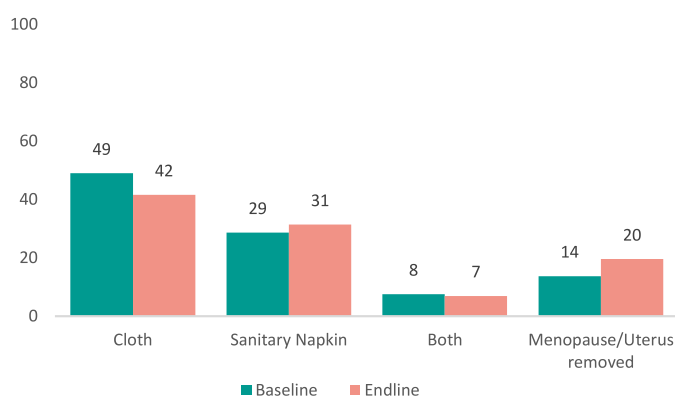
**FIG. 3.22:** Percentage of Respondents facing issues while going for Open Defecation during COVID



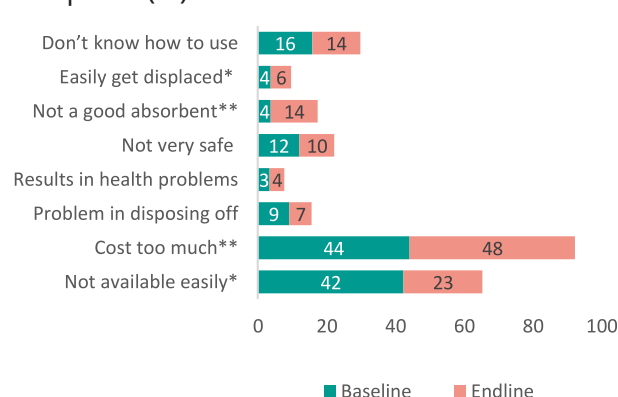
### 3.6 Menstrual Hygiene Management

One of the key aspects of the WASH module of the P.A.C.E. curriculum is menstrual hygiene. Data revealed that the use of sanitary napkins has increased significantly since the baseline (Fig. 3.23) but the reasons for non-use of sanitary napkins remained the same (Fig. 3.24).



**FIG. 3.23:** Type of Absorbent (%)\*\*

\*\* : 1% level of significance, \* : 5% level of significance

**FIG. 3.24:** Reasons for not using Sanitary Napkins (%)

The respondents were asked if they continued to use the same absorbent during the pandemic. Only 12 percent were not using the same absorbent and cited reasons such as their inability to go to the store, insufficient money to buy the product and non-availability of the preferred product at the store.

Correct menstrual hygiene is critical to leading a healthy life. 32 percent women reported following correct menstrual hygiene practices both at baseline and endline. However, only 14 percent of these respondents were common to both baseline and endline (Table 3.2). To understand the profile of those who consistently followed correct menstrual hygiene, further analysis was conducted, which revealed the following socioeconomic characteristics:

- Age group of 20–40 years.
- Educated and working at the time of the survey.
- Belonging to the medium or high standard of living category.
- Higher than average self-efficacy and self-assertive efficacy.

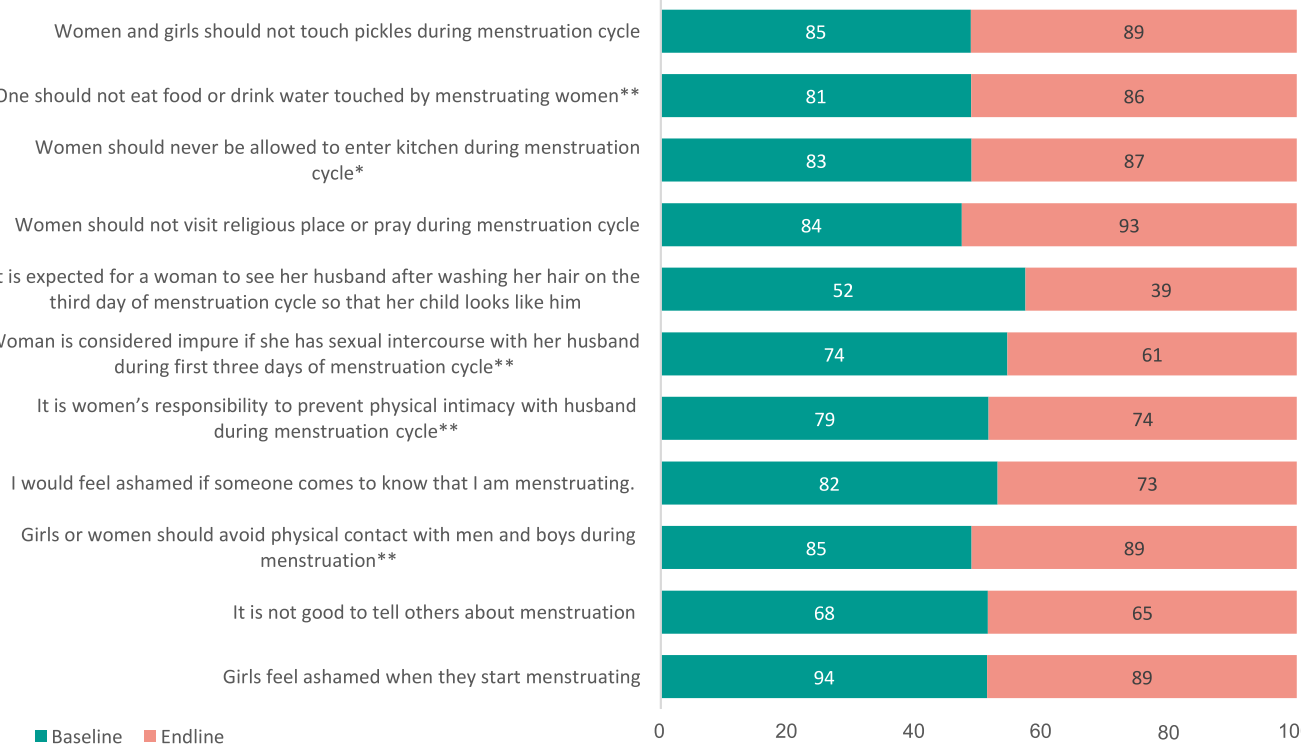
**TABLE 3.2:** Shift in Menstrual Hygiene Practice from Baseline to Endline

Type of Change (N=962)	%
Correct at both baseline and endline	14
Incorrect at both baseline and endline	48
Shifted from correct practice at baseline to incorrect practice at endline	19
Shifted from incorrect practice at baseline to correct practice at endline	19

Further analysis showed that 19 percent of the respondents shifted to an incorrect practice at endline from the correct practice at baseline. These were women who reported changing sanitary napkins/cloth less frequently (1–2 times) during the days of heavy bleeding, which was earlier reported as more than three times (Table 3.2). Possible reasons could be the presence of male family members at home during the pandemic and also reduced access to the absorbent (Plan International, 2020). It is critical to recall that a significant proportion of women also had relatively poor access to water, which has an impact on menstrual hygiene.

The study (Fig. 3.25) also captured the opinion of the respondents on menstruation-related beliefs in the community through a total of 11 statements. A higher percentage of respondents agreed at endline that menstruating women should not touch pickle, people should not drink water or eat food touched by menstruating women, menstruating women should not enter the kitchen or visit religious places and menstruating women should avoid physical contact. While a reduced proportion of respondents agreed that a woman should see her husband on the third day of menstruation, a woman is impure if she has sexual intercourse during menstruation and it is the woman's responsibility to prevent physical intimacy during her menstruating days, the decline was not significant. Also, comparatively fewer women agreed that it is not good to tell others about menstruation, and that girls feel ashamed if someone comes to know about their menstruation or when they start menstruating.

**FIG. 3.25:** Percentage of Respondents Agreeing to Menstruation-related Beliefs



\*\* : 1% level of significance, \* : 5% level of significance



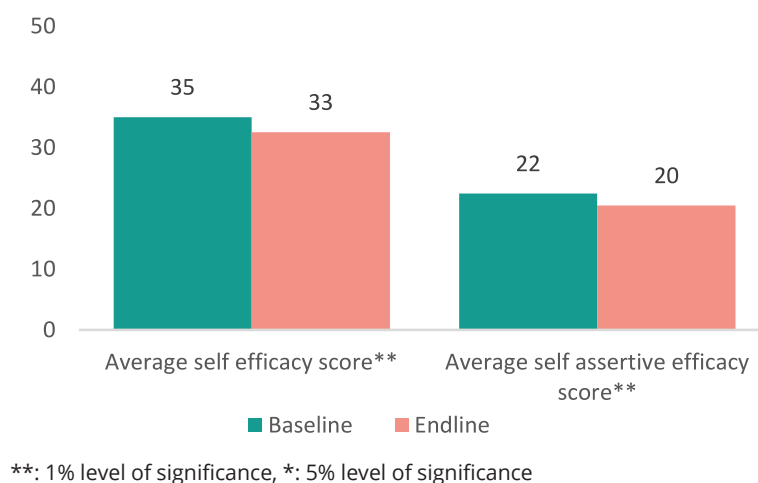
The findings reveal that knowledge about menstruation does not lead to shift in attitudes that emanate from a strong belief system. However, lesser women thought that the onus of avoiding intimacy with the husband is on the woman. This also indicates some level of shift in gender attitudes.

### 3.7 Self-Perception

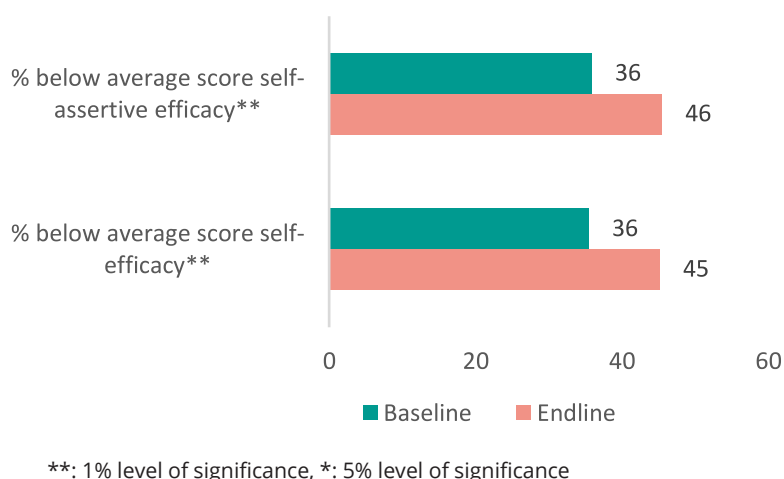
One of the key outcomes of the P.A.C.E. program is the change in self-perception. A significant decline was observed in the average self-efficacy and self-assertive efficacy score (Fig. 3.26). The mean score dropped by two points for both self-efficacy and self-assertive efficacy.

45 percent of the respondents recorded a below average self-efficacy score and 46 percent recorded a below average self-assertive efficacy score as compared to the respective baseline scores of 36 percent each (Fig. 3.27).

**FIG. 3.26:** Average Self-Efficacy and Self-Assertive Efficacy Score

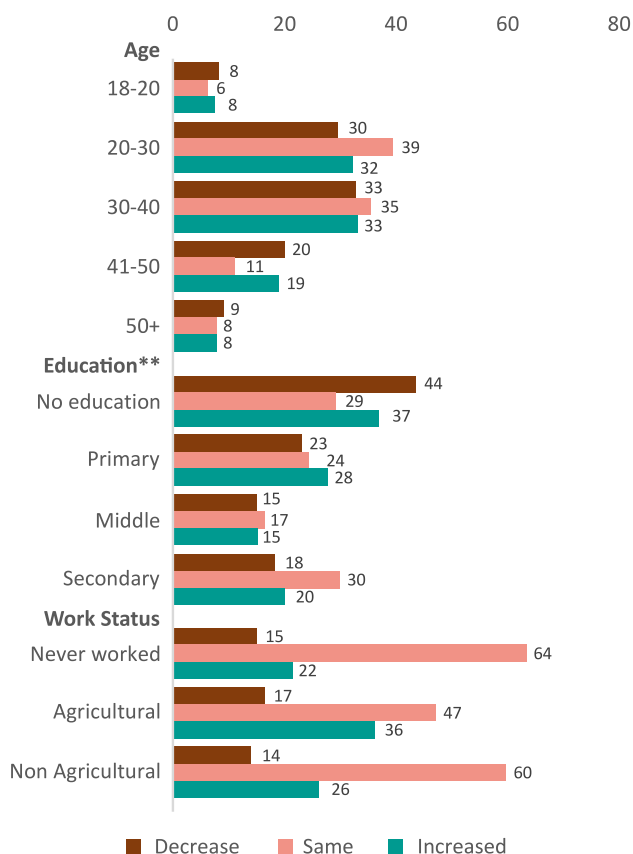


**FIG. 3.27:** Percentage of Women Below Average in Self-Efficacy and Self-Assertive Efficacy



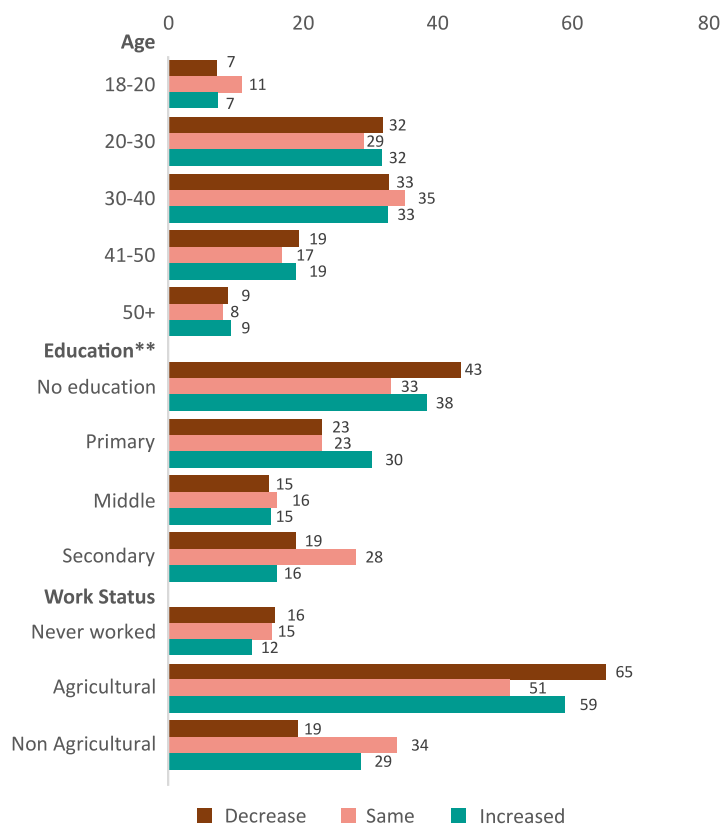
Further analysis of the self-efficacy and self-assertive efficacy scores by age, education and work status of respondents revealed that education is positively associated with self-efficacy and self-assertive efficacy scores (Figs. 3.28 and 3.29). This means that with an increase in education, the likelihood that the self-efficacy score will either increase or remain at the same level is higher. This holds true for the self-assertive efficacy score too.

**FIG. 3.28:** Change in Self-Efficacy Score (%)



\*\* : 1% level of significance, \* : 5% level of significance

**FIG. 3.29:** Change in Self-Assertive Efficacy Score (%)



For the endline survey, an additional statement was added to the self-efficacy measurement scale to examine how confident the respondent feels about handling stress related to COVID-19. 44 percent respondents said that they can handle any stress related to the pandemic. Analysis demonstrates that the respondents who claimed that they can handle stress related to COVID-19 also had a higher-than-average self-efficacy score (36.5) compared to the remaining sample (32.5).

P.A.C.E. is known to increase the self-efficacy and self-assertive efficacy of women. At the time of baseline, just after the P.A.C.E. training, women demonstrated high self-efficacy and self-assertive efficacy, but the average self-efficacy and self-assertive efficacy scores reduced by endline. COVID-19 emerged as a factor associated with this low self-efficacy score. Women who did not feel confident to handle the difficult situations caused by the pandemic showed low self-efficacy scores compared to those who could face any situation emerging due to the pandemic.

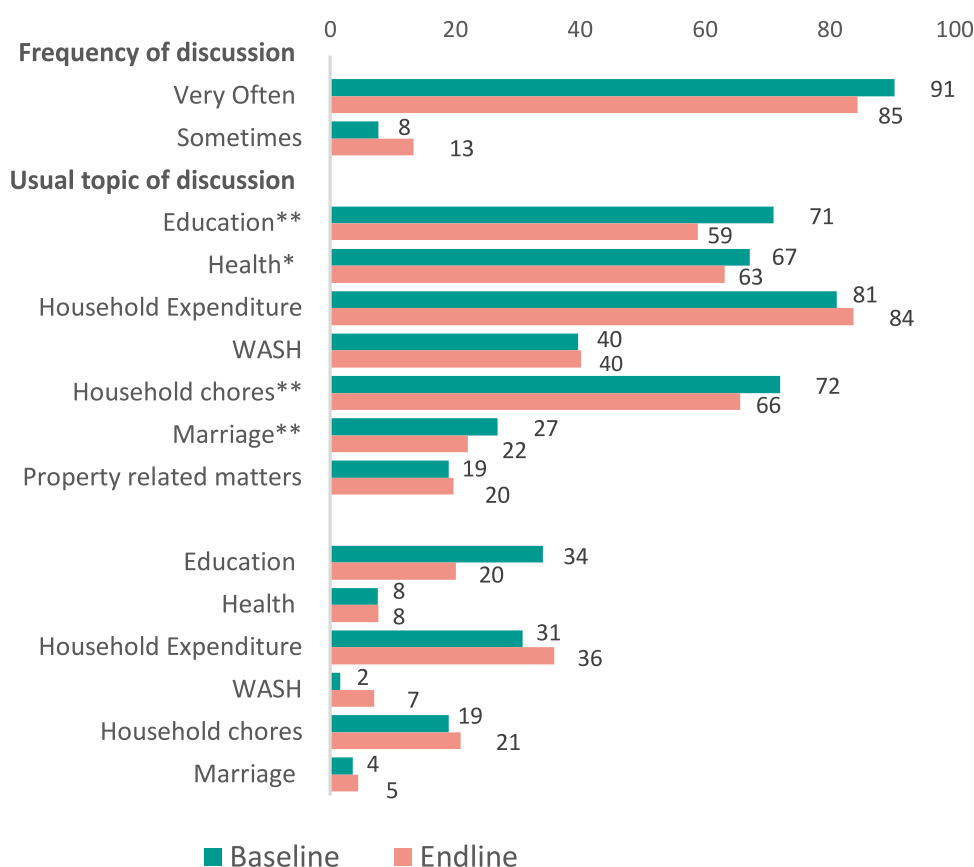
### 3.8 Communication with Family Members

The frequency of the respondents' interaction with family members appears to have reduced from 'very often' to 'sometimes' (Fig. 3.30). The top five usual topics of discussion that the respondent identified were household expenditure, health, education, household chores and WASH. Data suggests significant reduction in discussions on topics like education, health, household chores and marriage from the time of baseline to endline. Education, household expenditure and household chores were listed as the most comfortable topics of discussion by the respondents at both baseline and endline.



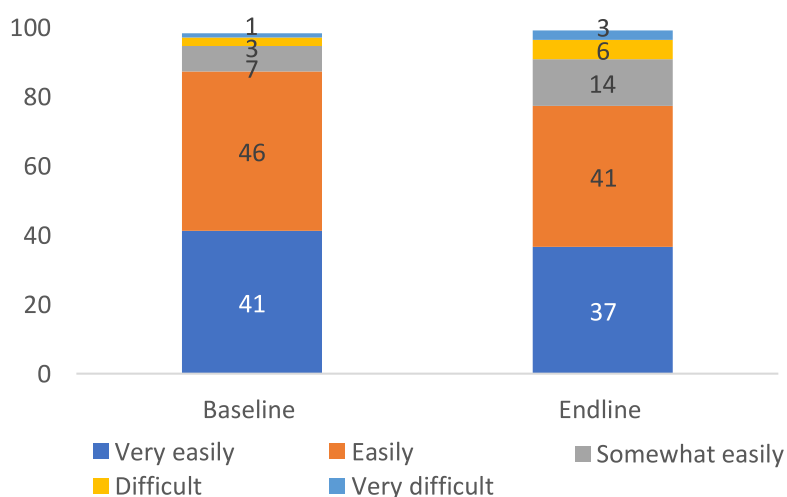
Respondents were also asked who they felt most comfortable discussing any topic with. Husband and mother-in-law were identified as the first and second most preferred people to discuss any household matters.

**FIG. 3.30:** Frequency of Discussion, Usual and Most Comfortable Topic of Discussion (%)



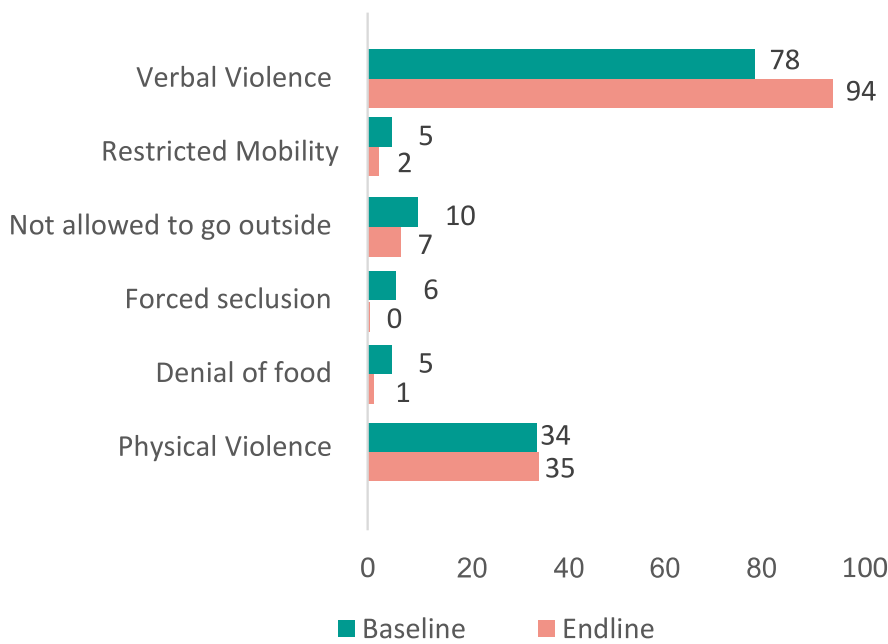
While women may discuss certain topics with the family, it was critical to understand whether women were able to challenge the decisions in their household. It was observed that the ease of challenging decisions has reduced significantly during the survey period (Fig. 3.31)

**FIG. 3.31:** Ease of Challenging a Decision (%)\*\*



\*\* : 1% level of significance, \* : 5% level of significance

**FIG. 3.32:** Type of Backlash Feared (%)



At endline, more than one-third (35 percent) respondents reported a fear of backlash if they challenged any decision, compared to 23 percent at baseline. Verbal violence (94 percent) was the most common fear among women, followed by a fear of physical violence reported by more than one-third of the women (Fig. 3.32). This confirms that women faced a greater risk of violence during the pandemic (Kapoor, 2021).

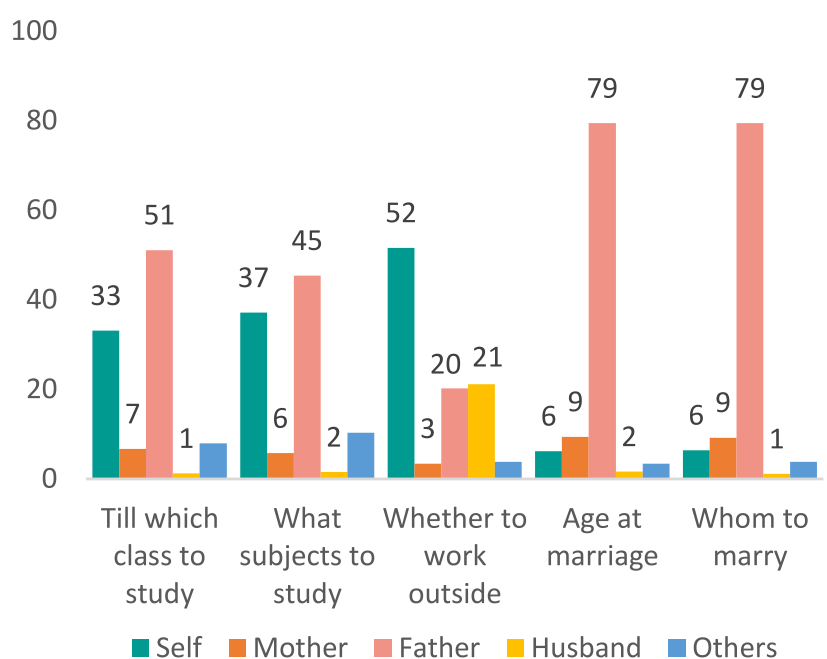
### 3.9 Decision-making for Self

Decision-making is considered a direct measure of agency (BMGF, 2021). The study also looked at women's participation in decision making on critical life events. 46 percent women reported that they took important decisions of their life on their own.

However, when women were asked to specify the decision maker for specific life events, they reported that their parents took most of the decisions when they were younger. More than three-fourth of the respondents said that their father took the decisions around education (till which class to study and what subjects to study) and marriage (when and whom to marry). While six percent respondents were able to take their own decision of whom and when to marry, more than one-third respondents also took the decision of till which class and what subjects to study (Fig. 3.33). Over half the respondents took their own decision to work outside home. For one-fifth of respondents, either their husband or father decided whether they could work outside.

Three-fourth of the respondents reported at endline that they took

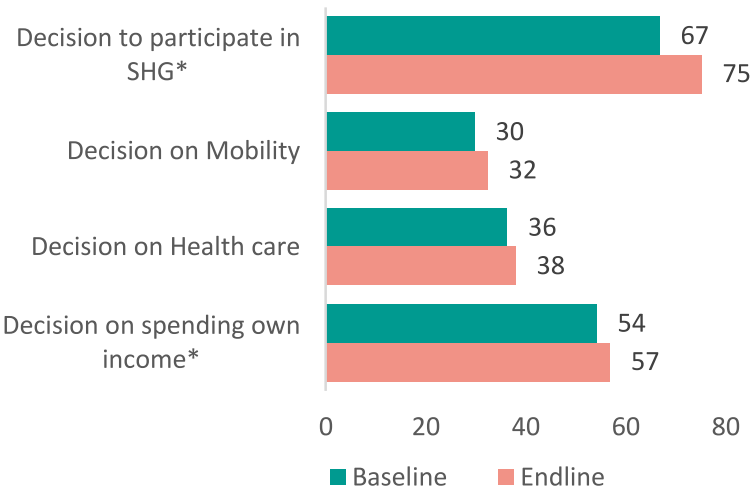
**FIG. 3.33:** Decision Making on Important Life Events



the decision to participate in self-help groups (SHG) on their own (Fig. 3.34). This is a significant increase over baseline (67 percent). The decision to spend their own income also increased significantly from 54 percent to 57 percent from baseline to endline. Decision-making by respondents on their mobility increased from 30 percent at baseline to 32 percent at endline. Healthcare decisions by self also increased from 36 to 38 percent. Although these changes are not statistically significant, it is important that women's abilities to take decisions for themselves have increased from baseline to endline.

Working women were asked about the level of control they had regarding spending their own money. While the majority (88 percent) said there was no change, the ones who reported less control (five percent) cited financial crisis as the reason.

**FIG. 3.34:** Decision Making on Mobility, Healthcare, Spending Own Income and Participating in SHGs (%)



\*\*: 1% level of significance, \*: 5% level of significance



### 3.10 Financial Planning and Saving for WASH

One of the key additions to the existing modules of P.A.C.E. was information on WASH-related government and private financial resources available in the community. The awareness of respondents about different government schemes thus increased since the baseline. A higher percentage of respondents were aware of schemes like the Total Sanitation Campaign and schemes to construct water sources and toilets (Table 3.3). The proportion of households that ever availed the benefits increased significantly, but the percentage of households who availed government schemes for water one year prior to the endline reduced. This could be attributed to COVID-19 related measures.

**TABLE 3.3:** Percentage of P.A.C.E. Participants Aware of Different Government Schemes

Percentage of P.A.C.E. Participants	Baseline	Endline
Aware about scheme to construct water source**	41.5	55.5
Households that ever availed benefits of any govt. scheme for water*	51.4 (N=531)	58.2 (N=710)
Households that availed benefits of any govt. scheme for water in last one year**	78.0 (N=273)	34.4 (N=413)
Aware about scheme to construct toilet**	56.3	67.9
Ever availed benefit of the scheme to construct toilet**	58.2 (N=721)	58.1 (N=869)
Availed benefit of the scheme to construct toilet in last one year	60.9 (N=420)	79.2 (N=505)
Aware of WASH loan**	25.2	7.3
Who had ever taken WASH loan	10.5 (N=323)	16.0 (N=94)
Who took WASH loan in last one year		6.7 (N=15)
Aware of Total Sanitation Campaign**	47.5	54.8
Aware of benefits from Total Sanitation Campaign**	40.1 (N=608)	58.3 (N=702)
Aware of Jal Jeevan Mission		48.9 (N=702)

\*\* : 1% level of significance, \*: 5% level of significance

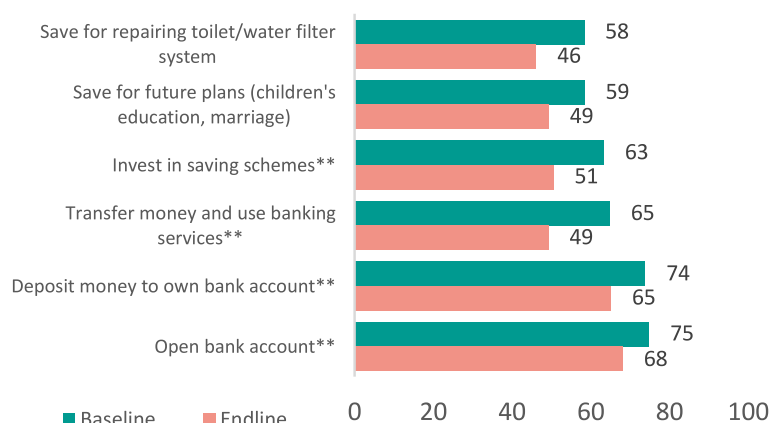
Awareness of WASH loans reduced significantly. Women received information on government schemes from the sarpanch, neighbors or relatives and P.A.C.E. program trainers.

A significantly higher proportion of women (95 percent) have bank accounts compared to the baseline (92 percent) but the ease of access to banking services has reduced



(Fig. 3.35). For example, at endline, a significantly lower proportion of respondents reported that they could easily open a bank account, access banking services, invest in saving schemes or deposit in their own bank account. This could also be due to COVID-19 related restrictions (lockdown, restriction on movement from one place to another or limited time slots available for the public to access banking services etc.).

**FIG. 3.35:** Percentage who can undertake Financial Activities



\*\* : 1% level of significance, \* : 5% level of significance

### 3.11 Factors Associated with Change in Key Outcome Indicators

The P.A.C.E. program aimed at equipping the women in the community with knowledge and skills to positively influence WASH behaviors and generate demand for WASH services. This section presents the analysis to understand the drivers of change in key outcome indicators. Regression analysis has been conducted to understand which factors are associated with positive change in behaviors including WASH.

#### 3.11.1 Factors Associated with Change in Self-Efficacy and Self-Assertive Efficacy

Self-efficacy and self-assertive efficacy are indicators to measure a woman's ability to deal with difficult and unprecedented situations and her ability to assert herself even in the face of opposition. It was observed that the self-efficacy and self-assertive efficacy score had declined due to the impact of COVID-19. The difference in the scores from baseline to endline for each respondent was calculated and then analyzed using linear regression (Table 3.4: Model 1 and Model 3). The second approach was to examine the factors associated with change in the self-efficacy and self-assertive efficacy score at endline, controlling for their respective scores at baseline (Table 3.4: Model 2 and Model 4).

**TABLE 3.4:** Factors Associated with Self-efficacy and Self-assertive Efficacy Score

Background Characteristics	Difference in Self-efficacy Score (Model 1)		Self-efficacy Score –Endline (Model 2)		Difference in Self-assertive Efficacy Score (Model 3)		Self-assertive Efficacy Score – Endline (Model 4)	
Self-efficacy Baseline							-	
Self-assertive Efficacy Baseline			-					
Age			0.037	**			0.866	**
Primary Education	2.257	**	1.869	**	1.259	**	0.982	**
Middle Education			2.249	**			1.570	**
Secondary Education	1.685	*	3.689	**				
Scheduled Caste								
Scheduled Tribe			-1.240					
Other Backward Classes								
Currently Working								
Standard of Living Score			0.236	**			0.196	**
Member of SHG			1.051	**	0.752	*	0.671	*

\*\* : 1% level of significance, \* : 5% level of significance

Across both the models, education is an important factor associated with positive change in self-efficacy and self-assertive efficacy scores. In Model 2, after adjusting for the baseline score, in addition to education, the standard of living and being a member of an SHG increases the likelihood of positive change in the self-efficacy and self-assertive efficacy score. This is supported by evidence from other studies that also found that SHG membership improved women's self-efficacy (Rani & Radhika, 2012; Newransky, Kayser and Lombe, 2014; Brody et.al., 2017; Zie, 2016).

### **3.11.2 Factors Associated with Sustained WASH Behavior**

The survey findings revealed that women continue to bear the responsibility of water-related decisions even when they seem to be shifting or sharing the responsibility with other women in the household. For further analysis, two regression models were used – Model 1 examined the factors for those women who took the decision at baseline and Model 2 for those women who took the decision both at baseline and endline for all the decisions related to water collection and handling practices (Table 3.5). The results indicate that the age of the respondent is associated with sustained decision-making on source of water, assigning responsibility of collecting water and decision on the type of water filter.

It is also important to mention that none of the factors included in the analysis had any significant association with decision-making at baseline (Model 1). Respondents aged 20 years and above are more likely to sustain their decision-making ability as compared to respondents below 20 years of age. High self-efficacy is an important factor for taking decisions on use of water filters and source of drinking water. High self-assertive efficacy is important for decisions on type of water filter and assigning responsibility for collecting water.



**TABLE 3.5:** Factors Associated with Decision-making on Different Aspects of Water Requirement at Home

	Filter Drinking Water				Source of Drinking Water				Assign Responsibility of Collecting Water				Decision on Type of Water Filter			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
<b>Background Characteristics</b>																
<b>Age (Ref. &lt;20 years)</b>																
20–30							2.143	*			2.753	**			1.908	*
30–40							3.095	**			3.400	**			2.967	**
41–50							2.745	**			3.119	**			3.324	**
50+							2.326	*			2.708	**				
<b>Education (Ref. No Education)</b>																
Primary																
Middle																
Secondary & Above																
<b>Caste (Ref. Other)</b>																
Scheduled Caste																
Scheduled Tribe																
Other Backward Classes																
<b>Currently Working</b>																
<b>Marital Status (Ref. Currently Married)</b>																
Never Married																
Others																
<b>Standard of Living (Ref. Low)</b>																
Medium																
High																
<b>Member of SHG</b>																
<b>Self-efficacy (Ref. Below Average)</b>																
Above Average							1.293	*								
<b>Self-assertive Efficacy (Ref. Below Average)</b>	1.384	*	1.456	**												
Above Average											1.490	**			1.378	*

\*\* : 1% level of significance, \* : 5% level of significance

### 3.11.3 Factors Associated with Sustained Handwashing Practices

Adoption of handwashing at critical times and sustaining this behavior is an important indicator of positive P.A.C.E. outcomes. The first model of regression analysis (Model 1) was run on the sample who reported handwashing with soap after three key activities at baseline. The second model (Model 2) was run on the sample who reported handwashing with soap after these activities at both baseline and endline (Table 3.6).

The findings suggest that work status i.e., respondents who were working at the time of the survey and respondents with medium or high standard of living were more likely to sustain

**TABLE 3.6:** Factors Associated with Adoption and Continuation of Handwashing Behavior after Key Activities

Background Characteristics	Handwashing after Defecation		Handwashing before Cooking		Handwashing before Eating	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>Age (Ref. &lt;20 years)</b>						
20–30						
30–40						
41–50						
50+						
<b>Education (Ref. No Education)</b>						
Primary						
Middle						
Secondary & Above						
<b>Caste (Ref. Other)</b>						
Scheduled Caste	0.351	**				
Scheduled Tribe						
Other Backward Classes						
<b>Currently Working</b>		1.628 *				
<b>Marital Status (Ref. Currently Married)</b>						
Never Married						
Others						
<b>Standard of Living (Ref. Low)</b>						
Medium		1.899 **				
High		1.956 **	1.377 *			
<b>Member of SHG</b>						
<b>Self-efficacy (Ref. Below Average)</b>						
Above Average	3.224 **	2.276 **	1.373 *	1.656 **	1.604 **	1.505 **
<b>Self-assertive Efficacy (Ref. Below Average)</b>						
Above Average	0.623 *	0.686 *	1.326 *			

\*\* : 1% level of significance, \* : 5% level of significance



handwashing behavior over a period of one year. None of the socioeconomic characteristics of the respondents had any statistically significant association with adoption or sustained handwashing behavior before and after cooking. It is also evident that respondents with a high self-efficacy score were more likely to adopt and sustain handwashing after defecation and before and after cooking once they were trained during the P.A.C.E. program.

### 3.11.4 Factors Associated with Decision-making

To examine the factors associated with decision-making on the construction of a toilet at home (Table 3.7), the two-model regression approach was adopted. The first model (Model 1) was run on the sample of respondents who took the decision to construct a toilet at baseline and the second model (Model 2) was run on the sample who reported taking the decision at both baseline and endline.

**TABLE 3.7:** Factors Associated with Decision-making for Construction of Toilet at Home

Background Characteristics	Decision to Construct Toilet			
	Model 1		Model 2	
<b>Age (Ref. &lt;20 years)</b>				
20–30				
30–40	4.376	**	3.986	*
41–50	7.522	**	5.934	*
50+	8.591	**	7.019	*
<b>Education (Ref. No Education)</b>				
Primary			1.589	*
Middle				
Secondary & Above				
<b>Caste (Ref. Other)</b>				
Scheduled Caste				
Scheduled Tribe				
Other Backward Classes				
<b>Currently Working</b>				
<b>Marital Status (Ref. Currently Married)</b>				
Never Married				
Others	2.593	**	2.105	**
<b>Standard of Living (Ref. Low)</b>				
Medium				
High				
<b>Member of SHG</b>	1.718	**	2.047	**
<b>Self-efficacy (Ref. Below Average)</b>				
Above Average				
<b>Self-assertive Efficacy (Ref. Below Average)</b>				
Above Average				

\*\* : 1% level of significance, \* : 5% level of significance

The findings suggest that respondents aged 30 years and above, those who are divorced, separated or widowed and a member of an SHG are more likely to take and sustain the ability to take a decision of constructing a toilet.

Decision-making for self is another important indicator of positive P.A.C.E. outcomes. Of the two models, Model 1 was run on the sample of respondents who took decisions on mobility and healthcare at baseline and Model 2 on the sample who took the decision at both the surveys. The results of Models 1 and 2 on mobility indicate that women aged 20 and above are more likely to take decisions and continue to take decisions on mobility compared to women less than 18 years of age (Table 3.8). It was also seen that women who are either widowed, divorced, or separated are more likely to continue taking decisions on mobility than currently married women. Women who were members of an SHG were also more likely to sustain their decision-making power on mobility.

**TABLE 3.8:** Factors Associated with Decision-making on Mobility and Healthcare

Background Characteristics	Decision-making on Mobility				Decision-making on Healthcare			
	Model 1		Model 2		Model 1		Model 2	
<b>Age (Ref. &lt;20 years)</b>								
20–30	2.723	*	10.246	*			4.700	*
30–40	6.123	**	25.483	**	2.290	*	9.392	**
41–50	7.503	**	23.566	**	2.451	*	7.047	**
50+	6.589	**	35.170	**				
<b>Education (Ref. No Education)</b>								
Primary								
Middle					1.580	*		
Secondary & Above								
<b>Caste (Ref. Other)</b>								
Scheduled Caste								
Scheduled Tribe								
Other Backward Classes							2.089	*
<b>Currently Working</b>								
<b>Marital Status (Ref. Currently Married)</b>								
Never Married					0.441	*		
Others	6.677	**	7.824	**	3.595	**	3.965	**
<b>Standard of Living (Ref. Low)</b>								
Medium								
High	1.581	*						
<b>Member of SHG</b>	2.174	**	2.156	**	2.018	**	1.606	**
<b>Self-efficacy (Ref. Below Average)</b>								
Above Average	1.446	*						
<b>Self-assertive Efficacy (Ref. Below Average)</b>								
Above Average								

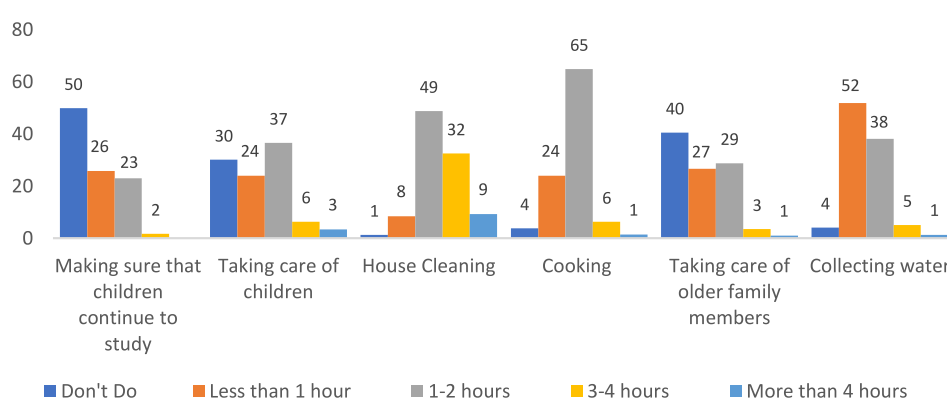
\*\* : 1% level of significance, \* : 5% level of significance

The regression analysis for decision-making on healthcare also support the findings that women aged 20 years and above, women who are either widowed, divorced or separated and are members of an SHG were more likely to take decisions on their healthcare at baseline and continue taking decisions at endline.

### 3.12 Impact of COVID-19 on Women

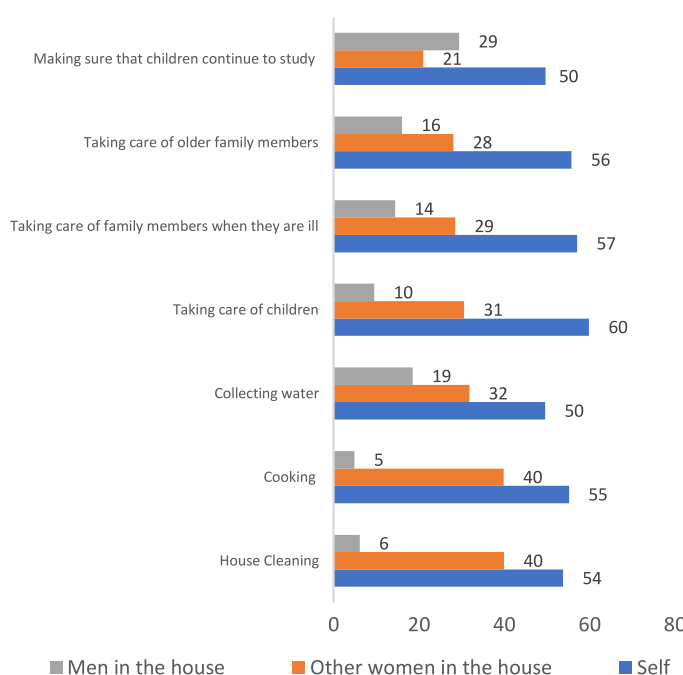
As mentioned earlier, the survey included questions on the time-use of women in different household activities and the impact that the COVID-19 pandemic had on the unpaid care work they engage in every day. Figure 3.36 presents hours spent on six activities every day during the pandemic. Cooking, house cleaning, taking care of children and collecting water are the three activities which consume maximum hours from women's daily activities. Nearly two-third (65 percent) respondents spent 1-2 hours daily in cooking, 24 percent spend about an hour in cooking. About half of the respondents (49 percent) spend 1-2 hours daily in house cleaning, 32 percent spend 3-4 hours in house cleaning and 9 percent spend more than 4 hours in house cleaning. More than one-third respondents spend 1-2 hours daily in collecting water and five percent respondents spend 3-4 hours in collecting water. More than one-third respondents reported 1-2 hours for taking care of children and 6 percent reported 3-4 hours every day for taking care of children.

**FIG. 3.36:** Time Spent on Household Activities (%)



To understand the impact of the pandemic on women's time use in unpaid care work, respondents were asked to report the increase or decrease in time being used for each activity. More than one-third respondents reported that since the start of the COVID-19 pandemic they have had to increase their time to make sure that children continue to study, 33 percent increased time in taking care of children, 29 percent reported more time required to clean the house, 26 percent reported spending more time in cooking, 22 percent reported more time needed to take care of older family members and 20 percent reported spending more time in collecting water than they used to spend before the pandemic. This implies that women had to increase their time in unpaid care work during the pandemic.

**FIG. 3.37:** Person who had to Increase their Time by Activity (%)



The women were also asked which family members had to increase time spent on each of the unpaid care tasks. The findings showed that it was primarily the women in the household who have had to increase their time. More than half of the respondents reported 'self' while another 30–40 percent said that other women in the household had to increase their time for each of these activities during the COVID-19 pandemic (Fig. 3.37). 29 percent women reported that men increased their time “to make sure that children continue to study”.

This highlights the gender division of work despite men being available at home during the COVID-19 lockdown. Literature on women's unpaid care work has also found that the COVID-19 pandemic has burdened women disproportionately (Addati et. al., 2018; UN Women, 2020; World Economic Forum, 2020; Gupta, 2021).





## 4 Discussion

The P.A.C.E. program has been found effective in improving women's self-esteem, communication skills and financial literacy skills along with their productivity. The W+W Alliance aimed to build on the success of P.A.C.E. to deliver WASH outcomes in the community. This impact evaluation study thus unpacks how P.A.C.E. outcomes contributed to change in WASH behaviors.

The timeline of the study coincided with the COVID-19 pandemic. Related measures such as the lockdown and social distancing impacted not only the program implementation but more so people's lives. It is thus critical to contextualize the findings of the evaluation study and ensure that the results are able to delineate the impact of the program and other external factors to the best extent possible.

The findings suggest that **women's unpaid care work increased during the pandemic**. This is supported by evidence globally (UN Women, 2020; World Economic Forum, 2020; Gupta, 2021). It was also found that during this period **women's access to improved sources of drinking water reduced significantly**. Despite a reduction in the number of trips to collect water, the **average time spent collecting water increased by over five minutes**. The **impact of COVID-19 on water access was evident** as almost half the women reported having to increase their time spent to collect water since the pandemic. The pandemic exposed the marginalized communities further to the risk of poor water access (Butler et.al., 2020; Desye, 2021).

As observed during the baseline, women continued to bear the responsibility of collecting water and taking decisions related to water. However, **a significant shift was observed as P.A.C.E. participants seemed to be shifting or sharing the responsibility with other women in the household but not men**.

Overall, a significantly **lesser proportion of women practiced correct handwashing**. This decrease since the baseline was **driven by the reduction in frequency of handwashing**, despite a significant increase in use of soap for washing hands. It must be noted that consistent messaging on washing hands with soap during the pandemic could have impacted the rise in use of soap. However, poor water access could be a plausible reason for lesser frequency of washing hands. It is critical to note that handwashing before feeding the child and after child fecal management reduced significantly at endline. There is a need to further explore the reasons behind this significant negative shift.

Since the baseline, **access to improved toilets was found to have increased, along with availability of water near the toilet**. As with water, the responsibility of cleaning and maintaining toilets lay primarily with women, which they are **increasingly sharing with or shifting to other women in the household**, while men take decisions regarding the construction or modification of toilets. **Positive attitudinal shifts** were also observed among P.A.C.E. participants who

demonstrated a greater understanding about the need to have and use toilets, and also increasingly felt that cleaning a toilet is not only women's work.

Those who do **not have access to toilets continued to face difficulties** such as not finding a place or having to wait and control their urge to urinate or defecate. This situation worsened during the pandemic. Unfortunately, these women were **unable to discuss these challenges with their family** due to shame and lack of a safe space.

The use of **sanitary napkins increased significantly** at endline, but the pandemic impacted usage of the same absorbent because women could not go to the store to buy the product, did not have the money to buy it or the product was not available at the store. Although use of sanitary napkins increased, only **14 percent respondents consistently reported correct menstrual hygiene practices** at both baseline and endline. These women were educated, between 20 and 40 years of age, belonged to the working class and came from either medium or high SLI (Standard of Living Index) groups. While the overall attitude towards menstrual practices has not shifted significantly, there is an indication of a shift in gender attitudes vis-à-vis practices related to spousal intimacy during women's menstrual cycles.

Education has a positive association with self-efficacy and self-assertive efficacy; a principle that held true in this study. **Higher education translates into higher self-efficacy and self-assertive efficacy** among P.A.C.E. participants. However, women's **average self-efficacy and self-assertive efficacy score was found to have reduced significantly** at the endline compared to baseline. Analysis showed that the **self-perception of women has been negatively impacted by COVID-19**. It will be important to further explore the factors that impacted women's self-perception negatively during the pandemic. Was it the presence of male family members or the isolation that most women experienced due to the strict COVID-19 protocols?

Interestingly, the frequency of discussions between spouses and family members reduced despite a possibility of greater presence at home due to COVID-19 related restrictions. **Women continued to prioritize household expenditure, education, health, household chores and WASH-related discussions** and felt comfortable discussing with their husband and mother-in-law or mother. WASH being one of the key topics of discussion also shows greater engagement with issues related to WASH.

Since the baseline, a **lesser proportion of women have a sense of ease in challenging decisions within the household due to an increase in fear of backlash**. The majority of the respondents feared verbal violence and more than one-third feared physical violence. This also could be due to men's presence at home, thus rendering women powerless. However, significantly more women claimed that they were taking their own decisions related to mobility, healthcare, spending their money and participation in SHGs.

During this period, **awareness of WASH-related government schemes increased significantly**, and more people availed the benefits of these schemes during the past year (from baseline to endline).

The regression analysis conducted to examine factors associated with the change in self-efficacy and self-assertive efficacy suggest that **education, standard of living score and membership**

**in SHGs are factors associated with positive change in the self-efficacy and self-assertive efficacy score.** It was observed that **SHG membership, which has the potential to provide women with livelihood opportunities, is also positively associated with decision-making (for self) on mobility and healthcare and decision-making for the household on construction of toilets.**

**Self-efficacy and self-assertive efficacy were found to have positive associations with the sustained ability to take decisions related to water and with sustained handwashing practices** behavior especially before and after critical activities like after defecation, before cooking and before eating.

The findings indicate that the P.A.C.E. program helped respondents adopt correct WASH behaviors and self-efficacy and self-assertive efficacy helped them to sustain the behavior for a period of one year. Their inability to continue correct WASH behaviors may be attributed to many factors, including COVID-19. This needs further exploration both quantitative and qualitative.

## **4.1 Implications for P.A.C.E. Program for Women**

The impact evaluation clearly demonstrates that key P.A.C.E. outcomes—self-efficacy and self-assertive efficacy—have a positive influence on adoption and maintenance of WASH behaviors. This implies that there is a need to continue investing in building women’s self-efficacy and self-assertive efficacy, both for improving WASH behaviors as well as for building resilience (Schwarzer & Warner, 2013)<sup>5</sup>. Especially in the context of COVID-19, which negatively impacted women’s self-efficacy, the importance of P.A.C.E. training needs to be highlighted, as those who felt that they could deal with COVID-19 had higher than average self-efficacy.

In addition, the learning groups that CARE formed for P.A.C.E. training can further be leveraged for improving both the P.A.C.E. key outcomes and WASH outcomes. Since SHG membership has a positive association with higher self-efficacy, learning groups provide a platform and opportunity to institutionalize them as SHGs by liaising with the State Rural Livelihoods Mission (SRLM).

P.A.C.E. outcomes can be further strengthened by reinforcing key messages for a sustained period after completion of the P.A.C.E. training. The institutionalization of learning groups as SHGs will also provide an opportunity for a sustained strategy.

While P.A.C.E. drives the changes at the level of the woman, there is a need to shift gender norms at both the household and the community level. This is critical for a program that aims to achieve WASH outcomes and impact health and well-being at the community level.

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<sup>5</sup> [https://www.researchgate.net/publication/284835420\\_Perceived\\_Self-Efficacy\\_and\\_its\\_Relationship\\_to\\_Resilience](https://www.researchgate.net/publication/284835420_Perceived_Self-Efficacy_and_its_Relationship_to_Resilience)







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# ANNEXURE 1

## Selection of Districts for the Evaluation Study by ICRW

Of the five districts in which the program is being implemented, a comparative analysis of key demographic and gender indicators from Census 2011 data, along with WASH-specific indicators from the I4DI baseline study was undertaken:

Indicators	Source of Information	Dewas	Sehore	Dhar	Khandwa (East Nimar)	Indore
Total Households (HH)	Census 2011	221,276	210,803	342,975	216,182	207,295
Total Population	Census 2011	1,111,956	1,064,439	1,790,452	1,050,625	1,082,589
Total Female (%)	Census 2011	48.58	47.82	49.49	48.49	48.36
Total Scheduled Caste (SC) (%)	Census 2011	19.28	21.76	6.17	11.66	19.02
Total Female SC (%)	Census 2011	9.37	10.39	3.04	5.63	9.29
Total Scheduled Tribes (ST) (%)	Census 2011	22.22	12.96	63.96	41.95	14.19
Total Female ST (%)	Census 2011	10.88	6.35	31.83	20.5	6.88
Total Workforce (%)	Census 2011	63.41	67.39	70.56	69.7	22.47
Female Workforce (%)	Census 2011	27.8	27.42	31.91	29.98	7.71
Improved Sanitation Adoption (%)	I4DI Baseline Study	69.23	72.27	53.08	62.13	67.14
Water Source Access (Improved) (%)	I4DI Baseline Study	86.15	80.91	78.59	75.15	75
Correct Handwash Practice (%)	I4DI Baseline Study	72.73	77.78	62.66	53.69	62.99

The following observations were made based on the socio-demographic profile of the districts:

- Sehore has the highest scheduled caste population, while Dhar has the highest scheduled tribe population.
- Correct handwash practice is lowest in Khandwa and highest in Sehore, while Dhar has moderate levels of practice.
- Similarly, improved sanitation adoption is lowest in Dhar, highest in Sehore and moderate in Khandwa.
- Khandwa is the only district where the program is being implemented in all the blocks, thus saturating the entire district.

Considering various demographic and WASH indicators, the following districts in MP were selected in consultation with Gap Inc. and CARE India:

- Sehore has a textile mill facility supplying to Gap Inc. in Budhni block.
- Dhar is a tribal district.
- Khandwa has a mix of population and the entire district is being saturated for the P.A.C.E. intervention.

## ANNEXURE 2

### Training, Field Implementation, COVID-19 Protocol, Data Finalization and Analysis

Trainings were conducted before initiating the baseline and endline surveys.

**Training for Baseline and Endline Survey:** Before initiating the field work for the baseline survey, the ICRW team conducted a five-day residential training for the investigators. The training included sessions on project brief, research ethics, child safeguarding policy and baseline study tool. After the classroom session, the research team members conducted mock interviews in the classroom setting followed by practice interviews in the field before initiating the survey.

In addition, as the endline survey was conducted during the period when COVID-19 cases were low, it was critical to ensure that the teams and the study participants stayed safe. A special session was conducted to explain the COVID-19 protocol to be followed during the training and data collection.

**Pre-Mapping Survey:** At the time of baseline, one of the key challenges that the team faced was in locating and identifying selected women. Learning from this experience, at the time of the endline survey, a pre-mapping exercise was conducted to ensure arresting the possibility of loss to follow-up. A team of investigators were trained to locate, identify and recruit participants of the baseline survey for the endline survey. The pre-mapping team visited the addresses of respondents to confirm the address and availability of the women for the endline survey. They then passed on the details to the main survey team who followed within 2-3 days to conduct the interview. This helped in greater retention of women at the time of endline and greater productivity for the survey team.

**Main Survey:** The research team, who were trained to conduct interviews, used the location details that were handed over to them by the pre-mapping survey team to contact the respondents. Before the interview, the Informed Consent form was read to the respondents to ensure that they understood their rights, were aware of all associated benefits and risks and had the opportunity to ask any questions related to the study. The interview was started only after the respondent agreed to participate in the study.

### COVID-19 Protocol

To minimize the potential risks of getting infected with or coming in close contact with someone who has been infected with COVID-19, ICRW identified various strategies to be followed at the time of training and during field activity and support to be provided by the research staff. The details are listed below:

#### COVID-19 protocol at the time of training:

- During training, a session was conducted to explain in detail about COVID-19 transmission and prevention to be taken during interviews and during the entire duration of the survey.

- Masks, sanitizer and soap for handwashing was made available for all the investigators.
- Compulsory handwashing with soap for all before entering and leaving the training venue, and available throughout the training duration.
- It was mandatory for all instructors and participants to wear face masks that covered the nose and mouth.
- The training room was well ventilated and large enough for social distancing norms to be observed. The room was cleaned before start of the day, during lunch break and at the end of the day.
- Separate copies of all the study materials and stationery items (e.g., pen, notebook etc.) were distributed to each training participant. Tablets were assigned to the participants during training and the same was used by that interviewer during data collection. Tablets were cleaned every day with disinfectant.
- There were daily reminders to avoid congregating at the entrance to the training venue. To avoid congregation during lunch or tea breaks, individual food packets were provided.

### **COVID-19 protocol during field activity (individual interview and any other in-person interaction):**

- The research team was instructed to wear a mask at all times while interacting with the study participants and any other person. Additionally, they were to stand at a safe distance when introducing and explaining the study. They were also instructed to avoid entering the household and avoid all contact with any items in households.
- It was also mandatory for all research participants to wear a mask. The field team provided them with a kit containing a mask, sanitizer and a fresh pen for signing the consent form. In case the respondent did not agree to wear the mask, the field investigator was instructed to terminate the conversation as approved by the IRB.
- Alcohol-based hand sanitizer was provided to the research team for use before and after each interaction with participants/others.
- For signing the consent form, the research team provided new pens to the participant that they may keep or throw away after use.
- Interviews were conducted in a space that was large enough to maintain social distancing in addition to ensuring privacy and confidentiality during the interview. If any team member felt unwell, they were instructed to isolate themselves and seek medical attention from the government health providers (list for each block was collated with support from the CARE MP team).

### **Guidance for research staff associated with the project:**

- Regular reminders were sent to the research team to wash hands with soap or use hand sanitizer, avoid all physical contact (e.g., handshakes or other usual physical greetings).
- Reminders to the research team to notify ICRW research staff or the PI if they were feeling unwell and to stay at home.

- Reminders to team members deploying to the field to wear face masks, including during transportation of teams to the field. Masks to be changed as needed throughout the day during fieldwork.
- Reminders to team members to always use their own materials and not swap pens, tablets, and other tools with teammates.
- Reminders to team members not to lend pens or pencils for written consent to participants.

### **Data Cleaning and Finalization:**

After completion of data collection, the data from baseline and endline were merged to create the final dataset in STATA. Variable labelling and coding were checked for consistency between the two rounds. For each variable, a thorough check was conducted to identify missing data points.

### **Explanation of regression models used for analysis:**

ICRW also examined the factors associated with decision-making (respondents who took the decision themselves at baseline and respondents who took decisions both at baseline and endline). The outcome variables considered for regression analysis were decision-making on mobility, healthcare, construction of toilet at household, decision making on type of water filter, source of drinking water, assigning responsibility of collecting water and decision to participate in SHG. In addition to decision-making indicators, ICRW also examined factors associated with sustained behavior related to handwashing (handwash after defecation, before cooking, before eating and after eating) and correct menstrual hygiene.





## ANNEXURE 3

### Comparison of Attrition Sample and Baseline Sample of Women

Background Characteristics	Baseline	Endline	Attrition
<b>Age</b>	<b>N=1,426</b>	<b>N=1,280</b>	<b>N=146</b>
18-20	11.2	7.9	19.9*
20-30	34.9	31.3	41.1
30-40	32.5	33.2	22.6
41-50	15.4	18.8	13
50+	6.1	8.7	3.4
<b>Religion</b>			
Hindu	94.7	94.1	95.2
Muslim	5.1	5.5	3.4
Others	0.2	0.4	1.4
<b>Caste</b>			
SC	23.1	19.5	26
ST	34.1	38.6	41.1
OBC	32.7	33.9	27.4
Others	10	8	5.5
<b>Marital Status</b>			
Currently Married	82.6	83.2	74.7*
Never Married	11.3	9.2	19.2
Others	6.1	7.6	6.2
<b>Work Status</b>			
Never Worked	14.7	14.8	17.1
Agricultural Work	59.1	60.8	57.5
Non-agricultural Work	26.2	24.4	25.3
<b>Type of Ration Card</b>			
BPL	57.6	53.6	58.2
APL	25.6	23.5	22.6
Others	4.3	8.4	3.4
No Card	12.5	14.4	15.7
<b>Children &lt;5 years</b>	35.8	33.0	37.0

## ANNEXURE 4

### Definition of Indicators used in the Study

Indicator	Definition
<b>Improved Source of Water</b>	Piped into dwelling, piped into plot, public tap/standpipe, tube well/borehole, protected well, protected spring, rainwater, community RO plant
<b>Correct Water Treatment</b>	Use of bleach/chlorine, alum, water filter or the practice of boiling water before it is considered safe to drink
<b>Correct Handwash Practice</b>	Washing hands each time with soap after the following five key activities: after defecation, before cooking, before eating, before feeding child, after disposing off child feces
<b>Improved Toilet Facility</b>	Flush toilet, ventilated improved pit, pit latrine with slab, twin pit/composting toilet
<b>Correct Menstrual Hygiene Practice</b>	Changing the sanitary napkin/cloth at least three times during the days of heavy flow, washing the cloth with soap and water and drying the cloth inside or outside the house under sunlight. This index was calculated only for those respondents who reported use of sanitary napkins or cloth or both of the absorbents. The respondents who reported menopause were excluded from this index.
<b>Standard of Living Index (SLI)</b>	<p>Household economic status was measured using a standard of living index calculated based on ownership of assets reported by respondents for their households. The following information was used for constructing the index:</p> <p>Access to drinking water facility; access to toilet facility; main material of floor; main material of exterior walls; main material of roof; type of cooking fuel used; ownership of the following assets: radio, bicycle, motorcycle, motorcar, freezer, washing machine, fan, heater, black &amp; white television, color television, telephone, mobile phone, sewing machine, presser cooker, watch, water pump, thresher, tractor, computer; if the household has a separate kitchen and ownership of a house.</p> <p>Index scores so constructed ranged from 6 to 26. Households were then ranked according to the index score. This ranked sample was divided into three groups, each containing an equal number of households. The first quintile represents households with low standard of living and the third represents households with high standard of living.</p>

Indicator	Definition
<b>Self-efficacy</b>	<p>In this study, self-efficacy was assessed based on the response to the following statements:</p> <ul style="list-style-type: none"> <li>■ I can always manage to solve difficult problems if I try hard enough.</li> <li>■ If someone opposes me, I can find the means and ways to get what I want.</li> <li>■ It is easy for me to stick to my aims and accomplish my goals.</li> <li>■ I am confident that I could deal efficiently with unexpected events.</li> <li>■ Thanks to my resourcefulness, I know how to handle unforeseen situations.</li> <li>■ I can solve most problems if I invest the necessary effort.</li> <li>■ When I am confronted with a problem, I can usually find several solutions.</li> <li>■ I wish I could have more respect for myself.</li> <li>■ If I am in trouble, I can usually think of a solution.</li> <li>■ I can usually handle whatever comes my way.</li> </ul> <p>Respondents were scored on a scale of 1 to 4 based on their response for each statement (Not at all true – 1, Hardly true – 2, Moderately true – 3, Exactly true – 4). The average score was calculated based on responses for all 10 statements.</p>
<b>Self-assertive Efficacy</b>	<p>Self-assertive Efficacy was assessed through a series of questions designed to assess the women's perceived self-worth. The participants responded to the following statements:</p> <ul style="list-style-type: none"> <li>■ Express my opinions when other people disagree with me.</li> <li>■ Stand up for myself when I feel I am being treated unfairly.</li> <li>■ Get others to stop annoying me or hurting my feelings.</li> <li>■ If I am in trouble, I can usually think of a solution.</li> <li>■ Stand firm to someone who is asking me to do something unreasonable or inconvenient.</li> </ul> <p>Respondents were scored on a scale of 1 to 5 based on their response for each statement (No confidence – 1, Very little confidence – 2, Moderate confidence – 3, Much confidence – 4, Complete confidence – 5). The average score was calculated based on responses for all the five statements.</p>
<b>Decision Making</b>	<p>The study examined involvement of the respondents in decision-making for three different categories. First, decisions on major and daily household needs. Second, decisions for herself like decision to visit her family or relatives, decision about her own healthcare and decision to participate in the P.A.C.E. program. Analysis was also done to check how many respondents could take all three decisions, at least one and none of these decisions for themselves. The third domain was WASH-related decision-making, which included decisions on water for daily use and construction of a toilet.</p>



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