



MENSTRUAL HYGIENE MANAGEMENT IN THE WORKPLACE ACTION RESEARCH

FINAL ACTIVITY REPORT

JANUARY 2022

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ACRONYMS AND ABBREVIATIONS

AI	Appreciative Inquiry
BCC	Behavior Change Communication
BCR	Benefit cost ratio
CBA	Cost-Benefit Analysis
CSO	Civil Society Organization
FGD	Focus Group Discussion
HR	Human Resources
KII	Key Informant Interview
MHH	Menstrual health and hygiene
MHM	Menstrual Hygiene Management
NGO	Nongovernmental Organization
NPR	Nepali rupees
PEA	Political Economy Analysis
SRH	Sexual and reproductive health
UNICEF	United Nations International Children’s Emergency Fund
WASH	Water, Sanitation, and Hygiene
WASHPaLS	Water, Sanitation, and Hygiene Partnerships and Learning for Sustainability
WHO	World Health Organization
WTP	Willingness to pay

EXECUTIVE SUMMARY

All over the world, people who menstruate experience challenges managing their periods, especially those who live and work in environments that do not support adequate menstrual health and hygiene (MHH). For working women, these challenges may have critical implications for their health and general well-being, as well as for economic outcomes such as work attendance, performance, advancement, and earnings. To better understand the relationship between women’s opportunities for economic empowerment and growth and Menstrual Hygiene Management (MHM), a subset of USAID’s holistic approach to MHH, USAID’s Water, Sanitation, and Hygiene Partnerships and Learning for Sustainability (WASHPaLS) conducted action research to assess the benefits and costs of improved MHM in the workplace, both for women workers and the enterprises that employ them. The action research sought to contribute to the body of knowledge on how to improve and measure MHM in the workplace, with a focus on gender-related sanitation outcomes and barriers that affect women’s ability to enter or remain in the workforce, including gendered social norms around menstruation and MHM.

The overarching objective was to determine if providing adequate MHM in the workplace contributes to women’s economic empowerment, including improved business and social outcomes, as reflected in the conceptual framework depicted in Figure 1.

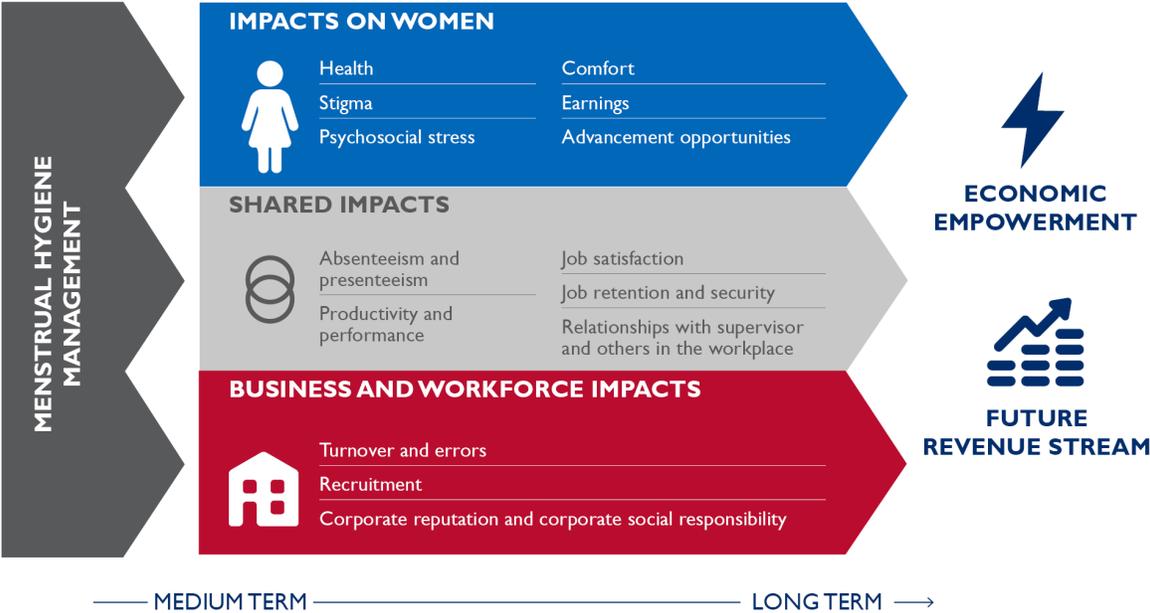


Figure 1. Conceptual Framework on MHM in the Workplace

1. What are the social and economic costs and benefits of providing adequate MHM¹ in the workplace?
 - a. What are the financial benefits and costs associated with adequate MHM in the workplace?
 - b. What are the social benefits and costs for women employees (e.g., self-confidence, psychosocial stress, job satisfaction) associated with adequate MHM in the workplace; for men employees, if any; and for employers (e.g., corporate reputation)?
 - c. Which characteristics of the workplace (e.g., type of employer/sector, proportion of female employees/supervisors/managers, socio-demographic profile of female workforce, etc.) are associated with the greatest benefits for women employees?
 - d. Under which conditions/context are there greater financial and social benefits for employers?
2. What are the internal and external factors influencing implementation of MHM interventions in the workplace and why?
 - a. Which factors (e.g., characteristics of employers, country/region cultural dimensions, policy/legal frameworks) helped facilitate implementation? Which complicated implementation?
3. What indicators are appropriate for measuring adequate MHM in the workplace, generating more evidence about women's experiences and the implications of MHM conditions?

To address the above questions, the action research was organized into the following six tasks: (1) desk review; (2) partnership development and research design; (3) workplace MHM Intervention; (4) cost benefit analysis (CBA) study; (5) metrics development and indicators field test; and, (6) dissemination of findings and results.

Key findings from the action research are as follows:

The **desk review** (Task 1) revealed that women experience significant challenges to managing menstruation on the job. MHM conditions in the workplace can undermine women's health, increase absenteeism, and negatively affect earnings, productivity, women's empowerment, dignity, and confidence. In contrast, there is little research to understand the difficulties working women experience in managing their periods and even fewer programs or initiatives that facilitate healthy and safe MHM in workplaces.

The **workplace MHM interventions** (Tasks 2 & 3) identified four private sector companies, two in Nepal and two in Kenya, who were willing to partner with the MHM in the Workplace Action Research

¹ Adequate MHM is defined by the World Health Organization (WHO), United Nations Children's Fund (UNICEF), and leading scholars as occurring when women and girls have: (i) awareness, information, and self-confidence regarding menstrual hygiene; (ii) access to safe, hygienic, and absorbent materials or products and supplies; (iii) access to safe and clean facilities that are equipped with water and soap to bathe oneself and clean or dispose of materials; and (iv) a supporting environment that allows women and girls to manage their periods without fear of stigma or embarrassment (Patkar, 2011; Sommer M. et al., 2016; Sommer & Caruso, 2015; WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation, 2015). The definition of adequate MHM is still evolving, however, as scholars and practitioners continue to refine the concept. For the purposes of this activity, we will follow WHO's lead, using the definition cited above.

to implement tailored interventions in order to improve conditions for their menstruating employees. The teams implemented interventions that spanned 11 months at Nepal Company A, 9 months at Nepal Company B, 9 months at Kenya Company A, and 5 months at Kenya Company B.

Research teams in both countries used qualitative research to gain an understanding of the context at each workplace setting. This enabled the teams to understand nuance and meaning attributed to MHM-related workplace experiences among all research participants. The teams also used qualitative insights to draw out recommendations to improve MHM in the workplace that would result in better experiences for women and improved productivity. Based on these findings, the teams developed workplace interventions along three core design elements, with contextual variations on specific activities. Interventions proposed at all four workplaces included a focus on products and infrastructure (Design Element 1) and workplace policies and guidance (Design Element 2) with country-specific modifications for each element (as well as tailoring for each workplace noted in the Inception Reports and Inception Report Addendums). Interventions in both countries also focused on changing attitudes, behavior, and workplace culture relating to menstruation (Design Element 3).

The worksite interventions revealed several benefits for women and their employers. In all four workplaces, the interventions catalyzed the following benefits for women, to varying degrees:

- Improved MHM: (a) greater knowledge of the physiology of menstruation, disposal practices, and awareness of a variety of menstrual products; (b) improved access to menstrual products such as disposable and reusable pads and to menstrual cups (in Kenya only); (c) increased access to cleaner facilities that were more conducive for managing menstruation (e.g., having water and soap, private, equipped with locks); (d) greater social support from women and men colleagues, supervisors, and company leadership; and (e) more hygienic use of menstrual products (i.e., use of safer products and less overwearing) and proper disposal of menstrual waste.
- Workplace benefits for women with implications for employers included: greater self-efficacy relating to performance at work while menstruating, higher job satisfaction, and lower absenteeism and presenteeism.
- Employers' benefits, including better corporate reputation and employees that felt an increased sense of "belonging" to their workplace.

The **CBA** study (Task 4) found that, on average, every \$1 invested in the intervention returned \$1.40 in benefits. Projected over two years, every \$1 returns \$2.30 in benefits. In other words, long term, the benefits of improved MHM are valued at more than double the cost of providing them. The site-specific benefit cost ratios (BCRs) were 1.5 at Kenya Company A, 1.6 at Kenya Company B, 0.5 at Nepal Company A, and 2.0 at Nepal Company B. Corresponding BCRs projected over two years were 2.2, 3.0, 1.1, and 2.9, respectively.

The **metrics and indicators development and validation study** (Task 5) gathered data on over 1,000 working women in Nepal and Kenya and identified a set of proposed indicators for measuring MHH in nationally harmonized surveys. These indicators seek to measure determinants of holistic MHH at the workplace and individual levels (e.g., access to menstrual materials), menstruation experiences at work (e.g., ability to change menstrual materials at work), and psychosocial outcomes relating to MHM (e.g., stress associated with accessing a location to change their menstrual material). A full report on the metrics validation exercise, including the data collected during the validation process, and a Guide to MHH Indicators, are available on GlobalWaters.org.

The team gathered **implementation-related lessons while conducting the workplace interventions:**

- How to implement a workplace intervention in the private sector considering competing priorities and demands on employee time.
- The role of corporate culture and leadership practices in supporting MHM, namely how leadership commitment and buy-in are essential to implementing a more expansive implementation (i.e., broader than menstrual product provision).
- Implementing an intervention in the context of COVID-19; specifically, lessons learned regarding recruitment of private sector partners and data collection, particularly reliable and consistent CBA data.

The team also identified **broader lessons learned and developed recommendations** for future work:

Lesson Learned	Recommendation
<p>Inadequate MHH in the workplace is a manifestation of pervasive underlying inequality and sexism, requiring multi-sectoral, systems-wide solutions:</p> <ul style="list-style-type: none"> • The experience of menstruation can diminish women’s chances of being treated as equals in the workplace • Women’s age and literacy contribute to MHM vulnerability in the workplace • Intersecting inequalities compound poor MHM in the workplace • An MHM-friendly workplace culture is essential but insufficient for sustainable change • MHM is a multi-sectoral issue 	<p>Approach MHH in the workplace in a holistic manner that considers improvements of MHH infrastructure and products, knowledge, and supportive attitudes alongside broader structural barriers related to gender equality.</p> <p>Approach MHH as a multi-sectoral development challenge by expanding the intervention mandate and collaborating with experts from different fields.</p>
<p>MHH is intricately connected with sexual and reproductive health and is a gateway to relevant services.</p>	<p>Create explicit and intentional linkages between MHH and SRH, e.g. expand the intervention’s theory of change, ensure co-funding with health resources, integrate SRH care in the workplace or implement systems for quality referrals, and measure both MHH and SRH outcomes.</p>
<p>Male engagement should happen on women’s terms.</p>	<p>Recognize when men’s roles in MHH in the workplace may be unwelcome or harmful, and work with menstruating employees to define the timing and content for strategies to engage men colleagues as allies and supporters of an MHH-friendly environment</p>

Lesson Learned	Recommendation
Adults have inadequate MHH knowledge, which require customized BCC content and approaches.	Customize BCC materials to the cultural context and in accordance with formative research findings to maximize appropriateness of content for adult workers.
Workplace-specific MHH operational policies benefit from broader national policy efforts.	Support the development and implementation of sound public sector MHH policies, and reference them to enhance internal private sector operational policies.
Sustaining intervention efforts beyond the project lifecycle requires engaging local stakeholders and vendors with valuable contextual knowledge.	Design with the end in mind: plan for sustainability of MHH efforts from the start by engaging with local experts and stakeholders who are positioned to continue the work in the long run.

Areas of future research should answer the following questions:

- What workplace features facilitate or hinder successful adoption of MHH practices? For example, do family-owned businesses, women-owned businesses, or businesses that require more detailed expertise/craftmanship by employees result in stronger commitment to/investments in improved MHH conditions? Are businesses that have majority female employees, or majority women in management and supervision roles more likely to implement MHH improvements?
- What are best practices to improve MHH in different work sectors (e.g., agriculture, technology, manufacturing, etc.)?
- Are there specific internal operational policies (e.g., paid sick leave benefits; temporary change in work responsibilities during menstruation, etc.) that are most effective in institutionalizing positive MHH changes?
- How can specific supervision practices and workplace incentives support MHH in the workplace?
- What is the relative contribution of infrastructure upgrades and free/subsidized menstrual products to improved MHH in the workplace, compared to an MHH-friendly workplace culture and stigma reduction?
- Which variables most significantly contribute to better business outcomes (e.g., through fewer absences, reduced presenteeism, improved corporate reputation) when we improve MHH in workplaces?

This report is structured in eight sections:

- **Section 1.0 Introduction** introduces the action research, including the motivation for the study and the research questions.

- **Section 2.0 Methodology** describes the methodology used for all six tasks, with links to more extensive documents detailing the research protocol (i.e., the inception reports).
- **Sections 3.0 Findings from Nepal** and **4.0 Findings from Kenya** focus on country-specific findings from Nepal and Kenya, respectively, as gathered from Tasks 2 & 3. These two sections present in-depth results from the baseline and endline evaluations, organized by the parts of the conceptual framework above.
- **Section 5.0 Summary of Baseline and Endline Results, Across All Four Workplaces** compares findings between the four workplaces in the two countries, using principally the quantitative data gathered through baseline and endline questionnaires administered to women employees.
- **Section 6.0 Cost-Benefit Analysis** explores the methodology of and findings from the cost-benefit analysis. This section describes and presents results from two separate but related analyses: a return on investment which weighs the costs of implementing the intervention with the benefits accruing to the company, and a broader CBA, which compares the costs of the intervention to the social (also referred to as economic) benefits of providing adequate MHM.
- **Section 7.0 Metrics Development & Indicators Field Testing** presents the motivation for Task 5 metrics development and indicators field test and the executive summary with a link to a standalone, full report.
- **Section 8.0 Implementation Lessons Learned** presents lessons learned from implementing the activity.
- **Section 9.0 Discussion and Recommendations** presents broad lessons learned regarding MHM and MHH, as well as relevant recommendations.

I.0 INTRODUCTION

All over the world, people who menstruate experience challenges managing their periods, especially those who live and work in environments that do not support adequate menstrual health and hygiene (MHH). For working women, these challenges may have critical implications for their health and general well-being, as well as for economic outcomes such as work attendance, performance, advancement, and earnings. To better understand the relationship between women’s opportunities for economic empowerment and growth and Menstrual Hygiene Management (MHM), a subset of USAID’s holistic approach to MHH, USAID’s Water, Sanitation, and Hygiene Partnerships and Learning for Sustainability (WASHPaLS) conducted action research to assess the benefits and costs of improved MHM in the workplace, both for women workers and the enterprises that employ them. The action research sought to contribute to the body of knowledge on how to improve and measure MHM in the workplace, with a focus on gender-related sanitation outcomes and barriers that affect women’s ability to enter or remain in the workforce, including gendered social norms around menstruation and MHM.

The overarching objective of the activity was to determine if improving MHM in the workplace contributes to women’s economic empowerment, including business and social outcomes, as reflected in the conceptual framework depicted in Figure I.

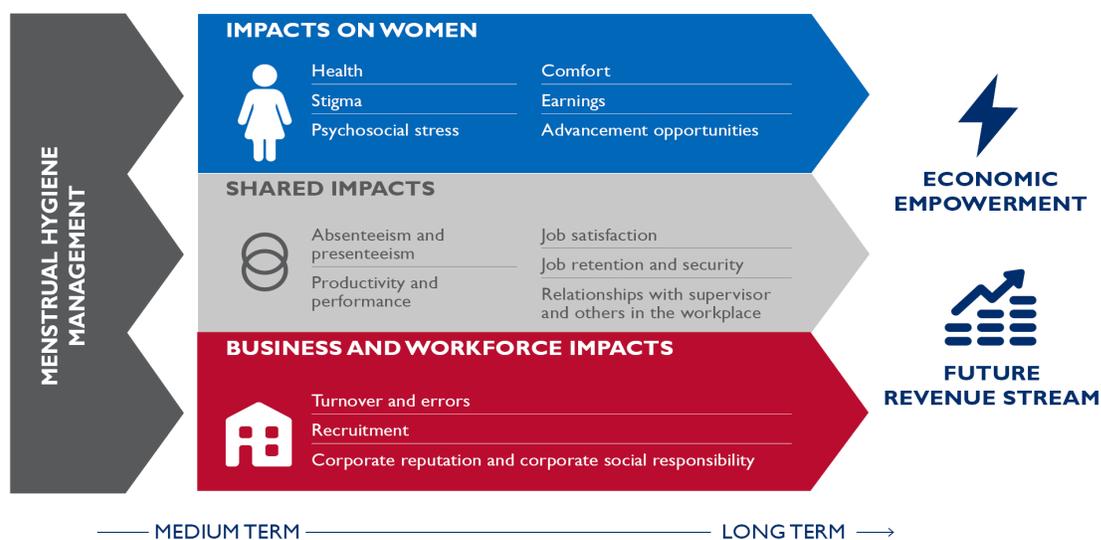


Figure I. Conceptual Framework for MHM in the Workplace

The following research questions guided this work:

1. What are the social and economic costs and benefits of providing adequate MHM² in the workplace?

² Adequate MHM is defined by the World Health Organization (WHO), United Nations Children’s Fund (UNICEF), and leading scholars as occurring when women and girls have: (i) awareness, information, and self-confidence regarding menstrual hygiene; (ii) access to safe, hygienic, and absorbent materials or products and supplies; (iii) access to safe and clean facilities that are equipped with water and soap to bathe oneself and clean or dispose of materials; and (iv) a supporting environment that allows women and girls to manage their periods without fear of stigma or embarrassment (Patkar, 2011; Sommer M. et al., 2016; Sommer & Caruso, 2015; WHO/UNICEF Joint

- a. What are the financial benefits and costs associated with adequate MHM in the workplace?
 - b. What are the social benefits and costs for women employees associated with adequate MHM in the workplace; for men employees, if any; and for employers?
 - c. Which characteristics of the workplace (e.g., type of employer/sector, proportion of female employees/supervisors/managers, sociodemographic profile of female workforce, etc.) are associated with the greatest benefits for women employees?
 - d. Under which conditions/context are there greater financial and social benefits for employers?
2. What are the internal and external factors influencing implementation of MHM interventions in the workplace and why?
 - a. Which factors (e.g., characteristics of employers, country/region cultural dimensions, policy/legal frameworks) helped facilitate implementation? Which complicated implementation?
 3. What indicators are appropriate for measuring adequate MHM in the workplace, generating more evidence about women's experiences and the implications of MHM conditions?

The following six tasks build on one another to address the above research questions:

- 1) **Desk Review:** The purpose of the desk review was to assess the state of the evidence on menstruation in the workplace, including determining the cost-effectiveness, sustainability, and scalability of approaches to improve conditions.
- 2) **Partnership Development and Research Design:** This task aimed to identify private sector partners who would be willing to take on the MHM workplace interventions and develop tailored interventions in coordination with the partners to meet the particular MHM needs of each workplace.
- 3) **Workplace MHM Intervention:** The team implemented workplace interventions and conducted baseline and endline evaluations as well as process monitoring to track the contributions of the interventions toward adequate MHM.
- 4) **Cost Benefit Analysis (CBA) Study:** In parallel to tracking data relating to adequate MHM, the team also collected data on the financial and social costs and benefits of implementing workplace MHM interventions.
- 5) **Metrics Development and Indicators Field Test:** A complementary task to the others, this one focused on reviewing existing metrics and indicators and developing (or adapting) existing metrics to assess MHM in the workplace.

Monitoring Programme (JMP) for Water Supply and Sanitation, 2015). The definition of adequate MHM is still evolving, however, as scholars and practitioners continue to refine the concept. For the purposes of this activity, we will follow WHO's lead, using the definition cited above.

- 6) **Dissemination of Findings and Results:** This final task included engaging with stakeholders and disseminating the findings and lessons learned across the entire activity.

As part of Task 6, this report shares the findings from the entire *MHM in the Workplace* action research. It is divided into nine main sections and corresponding appendices, which capture the breadth of the work completed as part of this activity. The report summarizes the methodology used to answer the three research questions (2.0 Methodology). The report also documents the findings from the workplace MHM interventions (3.0 Findings from Nepal, 4.0 Findings from Kenya, and 5.0 Summary of Baseline and Endline Results, Across All Four Workplaces), cost-benefit analysis (6.0 Cost-Benefit Analysis) and from the metrics development & indicators field test (7.0 Metrics Development & Indicators Field Testing). Finally, it presents lessons learned in two sections (8.0 Implementation Lessons Learned) and broader lessons recommendations for future investments in MHM including areas for further research (9.0 Discussion and Recommendations).

2.0 METHODOLOGY

2.1 TASK 1: DESK REVIEW

From February to October 2019, the team assessed the current state of the evidence on the adequacy of MHM in the workplace and its impact on women's economic empowerment guided by the following two questions:

- What approaches have been used to address MHM in the workplace? What is the evidence of the cost-effectiveness, sustainability, and scalability of these approaches?
- What are the links between MHM in the workplace and women's economic empowerment? What losses are there from a lack of MHM in the workplace?

Findings and recommendations drew from three complementary lines of inquiry: (i) a systematic review of the peer-reviewed literature; (ii) a comprehensive search of related gray literature; and, (iii) key informant interviews with experts in the areas of MHM, gender, and water, sanitation, and hygiene.

This task initially consisted of two subtasks: (i) a desk review and (ii) an economic impact study. However, the desk review yielded scant secondary data on the costs and benefits of MHM in the workplace (USAID, 2019). As a result, the team opted to defer the economic study and instead conduct it in parallel with the in-situ MHM interventions to allow for collection of primary data for input to the cost benefit analysis (see 2.4 Task 4: Cost-Benefit Analysis).

2.2 TASK 2: PARTNERSHIP DEVELOPMENT & RESEARCH DESIGN

As part of this task, the team conducted outreach through its networks to identify private sector partners in four proposed countries: Ethiopia, Kenya, Nepal, and Nigeria. Team members traveled to these countries in late 2019 and early 2020 for scoping trips to solidify partnerships and secure partnership agreements.

Scoping was interrupted by the onset of the COVID-19 pandemic. Travel restrictions hampered the team's and participants' movements. Potential private sector partners also saw their business operations and forecasts stall. By February 2020, the team had completed scoping trips in Ethiopia, Kenya, and Nepal; identified one partner company each in Ethiopia, Kenya, and Nepal. The team had also applied for USAID Mission concurrence and received it in Kenya and Nepal, Ethiopia outstanding. In both Kenya and Nepal, the team had the advantage of having core team members and/or other trusted team members in country, allowing work to proceed despite the advent of pandemic-related restrictions.

Activities in Nigeria and Ethiopia faced more challenges. Team members were in Nigeria for a scoping trip when the pace of the pandemic accelerated, and restrictions were implemented. As a result, the team struggled to identify a partner in Nigeria and eventually decided to discontinue efforts to implement workplace interventions there. Similarly, the team in Ethiopia suspended action research efforts due to the COVID-19 pandemic. When research was halted, the work in Ethiopia was at an earlier stage than in Kenya and Nepal. The team opted to conduct a political economy analysis (PEA) instead. Accordingly, the team decided to focus its efforts on two workplaces each in Nepal and Kenya, and immediately identified an additional workplace in each country.

Once private sector partners were selected, the WASHPaLS team conducted formative research in Kenya and Nepal. The primary objective of the formative research was to inform the intervention design

for the *MHM in the Workplace* action research initiative. Research teams used qualitative research techniques including focus group discussions (FGDs) and key informant interviews (KIIs) to gain an understanding of the context at each workplace setting.

With inputs from the formative research, the team developed inception reports for each country, focusing on one company in Nepal and one in Kenya. The inception reports included findings from the formative research; the intervention design based on these findings; the research protocol for monitoring and evaluating the interventions; staffing; and dissemination and engagement plans; as well as risk mitigation plans for COVID-19.

In all workplaces in Nepal and Kenya, the team nested three core design elements under specific activities. Interventions proposed at all four workplaces included a focus on products and infrastructure (Design Element 1) and workplace policies and guidance (Design Element 2) with country-specific modifications for each element (as well as tailoring for each workplace noted in the inception reports and inception report addendums). Interventions in both countries also focused on changing attitudes, behavior, and workplace culture relating to menstruation (Design Element 3).

The team planned to carry out these activities as outlined in the inception reports while also preparing to make adjustments based on the evolving COVID-19 situation or other changing circumstances. The inception reports were submitted to USAID for approval. The research protocol from the inception reports was also included in submissions to Health Media Lab, an ethical review board in the United States as well as those in each country. Following receipt of approvals from USAID and ethical review boards, the team began implementing the interventions as part of Task 3.

2.3 TASK 3: WORKPLACE MHM INTERVENTIONS

Teams implemented interventions spanning eleven months at Nepal Company A, nine months at Nepal Company B, nine months at Kenya Company A, and five months at Kenya Company B. Teams expected interventions to be a minimum of nine months and ideally twelve months to account for seasonal changes in production and business cycles. However, delays resulting from COVID-19-related restrictions curtailed the length of the interventions (further details in Limitations section). The five-month research period at Kenya Company B was the shortest, though the intervention lasted nine months. The team chose to conduct endline research early in Kenya Company B because the company experienced a large turnover of employees. Many of these employees had been present at baseline and received key components of the intervention at Kenya Company B (i.e., menstrual wellness bags, products education, and sensitization sessions). The intervention continued after the endline assessment, though only outcomes from five months of the intervention were included in the research, due to the early endline. All individuals who participated in the endline research at the four companies received the full intervention, according to their respective workplace.

The interventions began with launches at each workplace. The launch event at Nepal Company A involved all employees, owners, and management. The launch included distribution of *Maryadit Karyasthal* (dignified workplace) bags containing reusable pads, underwear, and disposable pads to women employees as well as an education session about how to use the menstrual products that were provided. The launch at Nepal Company B was more understated, involving only the distribution of the *Maryadit Karyasthal* bags and an education session on the products. The interventions at both Nepal workplaces were similar in design and implementation.

At Kenya Company A, the team launched activities with an event featuring opening remarks by the Managing Director of Company A and WASHPaLS team. The WASHPaLS team distributed menstrual wellness bags (i.e., menstrual cups, disposable pads, and reusable pads) and created a WhatsApp contact group consisting of women employees. The team then used the WhatsApp group to start education and sensitization sessions aimed at addressing workplace culture and initiated behavior change communication (BCC) activities. The team launched activities at Kenya Company B with a session for supervisors and senior management and sessions over four days (due to the larger size of the workforce) with women employees that included distribution of menstrual wellness bags (i.e., underwear, menstrual cups, disposable pads, and reusable pads) and education on how to use menstrual products. In contrast to Company A where women employees received in-person sensitization, those at Company B received only the products education session at launch, due to the large number of women they employed and the limited employee time available to the research team, as stipulated by company leadership. Table 39 and Table 40 in Appendix A: Process Monitoring Data contain details of the intervention implementation in each workplace in each country, including minor modifications to the intervention designs from what was proposed in the inception reports.

In each country, the team identified a set of sustainability partners who could continue, replicate, and/or scale the MHM workplace interventions in similar contexts. In Nepal, these include Federation of Women Entrepreneurs Association of Nepal, Nepal CRS Company, Kathmandu University School of Medical Sciences, Ministry of Water Supply, Department of Water Supply and Sewerage Management. In Kenya, sustainability partners were identified and recruited as members of an advisory group, which included a medical advisor, a male engagement advisor, a menstrual cup advisor, a media and culture advisor, BCC advisor, and policy advisors. Additional sustainability partners included Heroes for Change, the Endometriosis Foundation of Kenya, ZanaAfrica, and Ruby Cup, each of which expressed interested in offering consulting services to workplaces after the activity. The team engaged these individuals and organizations over the course of the intervention. Sustainability partners were especially critical in the dissemination and engagement phase (see 2.6 Task 6: Dissemination of Findings and Results).

To answer the research questions for the overall *MHM in the Workplace* activity, the team developed a research protocol that entailed baseline and endline data collection as well as process monitoring over the implementation of the interventions. While more details on the research protocol are contained in the inception reports and inception report addendums, Table I briefly lists the research tools used to collect data relating to the intervention outputs and outcomes:

Table I. Research Tools Used

Type	Tools
Quantitative Baseline/Endline	<ul style="list-style-type: none"> ● Women’s baseline/endline questionnaire ● Men’s baseline/endline questionnaire (Kenya only) ● Infrastructure assessment ● CBA worksheet
Qualitative Baseline/Endline	<ul style="list-style-type: none"> ● Women’s FGD guide ● Men’s FGD guide ● Supervisors’ FGD guide ● Union/worker relations representatives’ FGD guide (Kenya only) ● Senior management and leadership KII guide ● On-site nurse and first aid provider KII guide (Kenya only)

Type	Tools
Quantitative Process Monitoring	<ul style="list-style-type: none"> • Monthly SMS Women’s Questionnaire (Kenya only)
Quantitative Process Monitoring	<ul style="list-style-type: none"> • Infrastructure assessment • Quarterly output assessment

At baseline, the team administered questionnaires to respondents to gather socioeconomic and demographic information (limited), as well as knowledge, attitudes, and practices relating to MHM. The questions for women covered MHM knowledge, managing menstruation at work, social and practical support, menstrual health, social norms, stigma, bullying, performance at work, self-efficacy, job satisfaction, and economic empowerment. Men’s questionnaires were only conducted in Kenya; the team decided not to administer them in Nepal to reduce the data collection burden of partner companies. They covered MHM knowledge, support, stigma, and bullying. Each respondent was given an anonymous identifier (i.e., an ID number) to track individual outcomes over time. At endline, the team re-administered women’s questionnaires with the following adjustments: removed questions relating to pain, facilities, social norms, stigma, and bullying and added questions about MHM services. Additionally, in Kenya, the team removed questions about menstruation-related knowledge. The team modified men’s questionnaires at endline to include only questions relating to support at work.

Analyses of the quantitative data generated by the questionnaires compared baseline and endline responses at each workplace. In Kenya, a proportion of respondents had both baseline and endline data available (paired sample). For this sample, the team used the Wilcoxon Signed Rank test, which tests for differences in the mean or median of paired observations, to determine changes in responses to Likert-scale questions between baseline and endline. Likert-scale questions capture respondents’ level of confidence or agreement with a particular statement using a categorical scale (e.g., strongly disagree/disagree/neither agree nor disagree/agree/strongly agree). The team used the Paired Samples t-test, which tests for differences in the mean of paired observations, to determine changes in responses to yes/no questions between baseline and endline. In Nepal, the team did not match the baseline and endline data collected for individual respondents (unpaired sample). For this population, and for the unpaired sample from Kenya, the research team used the Wilcoxon Rank Sum test, which tests for differences in the mean or median of independent samples, to assess changes in responses to Likert-scale questions. The Welch two sample t-test, which compares means between two independent samples with unequal population variances, was used to assess differences in responses to yes/no questions. Both the Wilcoxon Signed Rank test and the Wilcoxon Rank Sum test compare differences in scores without assumptions of normality or homogeneity of variance. Analyses used conventional thresholds to determine statistical significance (e.g., $p < 0.05$) while stating the actual p-value, as per scientific consensus, in the tables and narrative when appropriate.

The team also collected qualitative data at baseline and endline through FGDs and KIIs using semi-structured guides with women employees, men employees, supervisors, managers, owners and senior leadership, and other key workplace influencers at all four workplaces (including non-employee household and community members in Nepal). The team organized findings based on the WHO definition for adequate MHM: (i) awareness, information, and self-confidence regarding menstrual hygiene; (ii) access to safe, hygienic, and absorbent materials or products and supplies; (iii) access to safe and clean facilities that are equipped with water and soap to bathe oneself and clean or dispose of materials; and (iv) a supporting environment that allows women and girls to manage their periods without fear of stigma or embarrassment.

The team collected comparable quantitative data using similar questionnaires in all four workplaces with slight modifications for each country context. However, meticulous comparison of the questionnaires is challenging. The team designed the activity for four, separate, diverse workplaces (though with some similarity between the two carpet factories in Nepal) and tailored interventions according to formative and baseline assessments in each country. Important differences between each workplace merited nuanced intervention approaches in each site. As it is difficult to make direct comparisons, Section 5.0 Summary of Baseline and Endline Results, Across All Four Workplaces presents explanations of differences between the four workplaces and supporting quantitative data from each. Additionally, due to the limited intervention period, the team was not able to measure changes in advancement opportunities in the workplace; corresponding pay increases, for instance, are not likely to manifest over such a short duration. It remains possible that the demonstrated changes will result in increased responsibilities and pay for women in the future.

In addition to conducting these four workplace interventions in Kenya and Nepal, the team conducted a political economy analysis (PEA) in Ethiopia. The PEA sought to identify the political and economic incentive structures enabling or inhibiting adequate MHM access³ in Ethiopia's industrial parks. The PEA deployed a gender-intentional lens and assessed possibilities and constraints for future programming to improve MHM. The team examined the political and economic context for MHM in Ethiopia's industrial parks using the four PEA pillars of analysis:

- Foundational Factors: Embedded structures or systems that are difficult or impossible to change, such as geography, class, ethnicity, and gender inequality
- Rules of the Game: Laws, international commitments, policies, and social norms
- Here and Now: Current events and circumstances
- Dynamics: Interplay among the other pillars

The final PEA report presents the landscape for MHM in Ethiopia's industrial parks, summarizes the findings from the desk review and interviews, and provides recommendations for potential interventions.

2.4 TASK 4: COST-BENEFIT ANALYSIS

Section 6.0 Cost-Benefit Analysis details the methodology of and findings from the cost-benefit analysis conducted as part of this activity.

2.5 TASK 5: METRICS DEVELOPMENT & INDICATORS FIELD TESTING

Task 5 was undertaken under a separate sub-contract held by Athena Infonomics and Emory University. Following the award, the team conducted a kickoff meeting with Athena/Emory in late 2020 followed by a second planning meeting in early 2021 to align on the approach and the expectations for the first deliverable: Deliverable 1 Field Testing Plan. In this deliverable, Athena/Emory summarized existing and available metrics as well as their proposed plans for adaptation. Building on feedback from WASHPaLS' review of Deliverable 1, Athena/Emory prepared Deliverable 2 Research Protocol, in which they detailed the procedures and tools used to conduct cognitive interviews and survey data collection in Nepal and Kenya. While seeking approval for Deliverable 2 from WASHPaLS and USAID, Athena/Emory

³ This analysis defines adequate MHM as contributing to menstrual health, including: "information about the menstrual cycle; materials, facilities, and services to care for the body; diagnosis, care and treatment for discomforts and disorders; a positive and respectful environment; freedom to participate in all spheres of life" (Hennegan et al., 2021).

submitted an ethical review application to the Emory University Institutional Review Board and later to country-specific ethical review boards.

Delays in review processes led to some modifications of the research protocol proposed, specifically in how the team conducted cognitive interviews. As described in the research protocol, Athena/Emory planned to conduct cognitive interviews with community members who would be similar in terms of socio-demographic characteristics to the working women from whom they expected to collect survey data. As delays in ethical review continued, compounded by further COVID-19 delays, the team pivoted to conducting the cognitive interviews with their own enumerators, thereby sidestepping the ethical review for this process. The team used inputs from the cognitive interviews to revise the research protocol, detailed in Deliverable 3 Interim Progress Report. The team's modifications to the process included shortening the questionnaire, omitting modules that provided interesting but irrelevant data. They also modified questions for greater clarity and removed some questions that were considered sensitive and/or offensive to the enumerators (e.g., module on stigma relating to menstruation). Concluding these revisions, the team translated the final tools into Nepali and Swahili and uploaded them into the open data kit platform in preparation for survey data collection.

Survey data collection lasted four weeks each in Kenya and Nepal. In both countries, the team faced challenges in recruiting participants. They received high rates of refusal with potential respondents citing discomfort with letting strangers into their house in the context of COVID-19. In Kenya, the team approached over 1600 individuals, and proceeded with a sample size of 600 working women. In Nepal, Athena/Emory faced even more difficulty. Multiple delays in starting data collection forced the team to implement the surveys during Nepal's monsoon season and right before the start of the country's holidays. Due to the safety and logical issues associated with these challenges, the team suspended data collection after surveying approximately 400 women in Nepal. This number was sufficient for psychometric testing of the scales in the survey instrument, according to best practices in measurement theory.

After completing data collection, the team delved into data analysis and prepared the final report (USAID, 2021). The team conducted descriptive analyses, confirmatory and exploratory workplace analyses, and developed a set of proposed indicators to include in national, harmonized data sets.

2.6 TASK 6: DISSEMINATION OF FINDINGS AND RESULTS

The final task of the *MHM in the Workplace* activity entailed dissemination of findings and lessons learned, as well as engagement with key stakeholders at local, national, and global levels in Nepal and Kenya. As part of the inception reports, the team outlined dissemination and engagement efforts in each country. Throughout the intervention, research teams in Nepal and Kenya engaged members of their advisory committees, sustainability partners, and government stakeholders to promote discussions about MHM in the workplace.

In both Nepal and Kenya, research teams organized end-of-project dissemination and learning events for business leaders and other stakeholders in the private sector in December 2021. The events shared high-level findings from the intervention, celebrated partner workplaces, and convened a panel discussion about the value of improving MHM in workplaces from a business, medical, and policy perspective. The events laid the groundwork for new businesses to potentially take up similar menstrual health and hygiene efforts. Both events were designed to be held in-person with a limited audience, per

COVID-19 risk mitigation guidelines. Research teams in each country shared high-level findings with business leadership at each workplace.

Throughout the activity, the team disseminated information about the *MHM in the Workplace* interventions to global audiences through conferences, presentations, and social media posts. Iris Group convened side events and presented posters at the UNC Water & Health Conferences in 2019, 2020, and 2021; presented posters at Stockholm Water Week 2019 and Triangle Global Health Conference in 2020; presented on male engagement efforts in Kenya at the Menstruation: Sharing Experiences from the Global North and South Conference 2021; and presented on the CBA component at the Society for Benefit-Cost Analysis Annual Conference 2021. Presentations for global and targeted audiences included a Menstrual Hygiene Day webinar in 2020, a session for a Massive Open Online Course on global menstruation for Columbia University in 2021, a Period Posse webinar in 2021, a Global Health Science and Practice Technical Exchange session in 2021, and an internal presentation for USAID Gender Equality and Women's Empowerment Office in 2021.

In January 2022, USAID organized a virtual dissemination event to share high-level learnings from the *MHM in the Workplace* activity with a global audience of researchers, practitioners, civil society groups, policymakers, and scholars. In addition to this comprehensive, final report, Iris Group prepared learning briefs that succinctly present key learnings from the activity, particularly about findings from Kenya, Nepal, and the CBA, as well as the BCC approaches and male engagement efforts in both countries (available here: <https://www.globalwaters.org/HowWeWork/Activities/menstruation-workplace>).

3.0 FINDINGS FROM NEPAL

3.1 INTRODUCTION

The research team performed baseline and endline assessments before and after implementing the MHM in the Workplace interventions at both workplaces in Nepal.

Company A is a family-owned business located in Jorpati (on the outskirts of Kathmandu), currently employing 124 individuals from various ethnic, religious and caste backgrounds at their workplace. It specializes in the manufacture of high-end designer carpets. Company B is another family-owned business also located in Jorpati that specializes in high-end carpet manufacturing. It currently employs 96 staff, most of whom are from the Tamang community and come from Makawanpur, Sinduli, and Bara Districts.

Table 2. Company profiles for Nepal Company A and Nepal Company B

Feature	Company A	Company B
No. of women employees	<ul style="list-style-type: none"> 52 baseline–58 endline 	<ul style="list-style-type: none"> 67 baseline–63 endline
No. of managers	<ul style="list-style-type: none"> 1 	<ul style="list-style-type: none"> 1
No. of supervisors	<ul style="list-style-type: none"> 9 (4 on loom, 3 on yarn, 1 on cutting) 	<ul style="list-style-type: none"> 3
Industry	<ul style="list-style-type: none"> Carpet manufacturing 	<ul style="list-style-type: none"> Carpet manufacturing
Women employees age range	<ul style="list-style-type: none"> 21–62 	<ul style="list-style-type: none"> 17–43
Education level	<ul style="list-style-type: none"> Highest was secondary school; 80% below primary level 	<ul style="list-style-type: none"> 0 to grade 5–6; around 70% did not receive any education
Literacy and language preference	<ul style="list-style-type: none"> 90% of women have perhaps completed grade 3, have almost no literacy (can barely sign their names; cannot read and write) Language preference Nepali among women; mix of Nepali, Hindi, Bojhpuri and Maithili among men 	<ul style="list-style-type: none"> Majority have not attended school or very minimally; majority have very limited reading and writing skills but they can sign their names Language preference is mixed Nepali, Maithili, Tamang/Sherpa (same for men and women)
Workplace dynamics	<ul style="list-style-type: none"> Predominantly male (maximum no. of male participants in FGD was 18); most live there with their families. Most of the weavers live on factory premises; most of the ballers (14 in total) come daily from different locations Men were very interested in learning about MHM. Shy at start but towards the end were quite open. 	<ul style="list-style-type: none"> Predominantly female; Age range for men is 18–35 (younger than at Company A); most of the men are unmarried Very shy and had very limited knowledge about MHM According to men FGDs, they had no communication between men and women about this issue at the start of the project Very limited communication between female employees about menstruation at baseline; this changed as the intervention progressed.

Feature	Company A	Company B
	<ul style="list-style-type: none"> Workers never critiqued the owners, shared complaints/concerns with research team. Felt more comfortable reaching out to the manager (not owner) 	<ul style="list-style-type: none"> Leadership (except owner) have extensive presence on the factory floor and are often regarded on the same level as the supervisors. No female supervisors Workers were unhappy with living conditions and infrastructure at baseline; but got more vocal as intervention went on Workers seem relatively comfortable talking with/approaching owner
Existing initiatives at baseline	<ul style="list-style-type: none"> Company provides housing, electricity, water, day care center for children of female workers; schooling up to age 18; give selective scholarships for children of workers for higher level education (38 scholarships last year) Children receive milk every day; there is a playground for the children Before COVID-19, company brought in a doctor to the factory once a week (refer for immunizations, provide over the counter meds) During COVID-19, company coordinated with a local health person to provide a session on how to use a mask and how to sanitize hands 	<ul style="list-style-type: none"> Free housing, electricity, water Did not pay for education, but during COVID-19 did a cost-share for a teacher to come and teach the children of factory workers (50%–50% share with the workers) The owner had requested a nongovernmental organization (NGO) to provide some education relating to menstruation During COVID-19, local municipality provided one packet (7 pads) of pads, bar of soap, and hand sanitizer to all the female workers

Baseline data collection took place prior to the MHM in the Workplace intervention launch at each workplace (November 30–December 4, 2020 at Company A and February 10–13, 2021 at Company B). Endline data collection occurred on October 28, 2021 at Company A (with one FGD on September 22, 2021) and on September 25 at Company B.

The research team was comprised of two Nepali women research consultants and one Nepali man research consultant, with an American woman researcher (i.e., Iris Group Senior Associate) providing technical oversight and overall management of onsite activities. Table 3 below presents the data collected at baseline and endline at both partner company workplaces.

Table 3. Data collected for analysis at baseline and endline at Nepal Company A and Nepal Company B

Data Collection Method	Tool	Number at Baseline – Company A	Number at Endline – Company A	Number at Baseline – Company B	Number at Endline – Company B
Women Employees					
FGD	Women’s baseline/endline FGD guide	Total number people (Number of groups) – 8 groups at	7 groups (52 women) at endline (missed 6 women since	12 groups (67 women)	11 groups (63 women)

Data Collection Method	Tool	Number at Baseline – Company A	Number at Endline – Company A	Number at Baseline – Company B	Number at Endline – Company B
		baseline (total 52 women)	number of women increased to 58)		
Questionnaire	Women’s baseline/ endline questionnaire	52 women	52 women	67 women	63 women
Men Employees					
FGD	Men’s baseline/ endline FGD guide	5 groups (29 participants)	3 groups (16)	3 groups (15)	3 groups (21)
Supervisors					
FGD/KII	Supervisors baseline/endline FGD/KII guide	5 supervisors (in one FGD)	0 supervisors *(FGD w/men included some supervisors, but unclear how many)	3 KII supervisors	1 KII
Senior Management and Leadership					
KII	Management and Leadership baseline/endline FGD guide	1 manager 2 owners (had limited conversation w/third owner)	1 manager 2 owners	1 owner 1 owner/manager	1 owner/manager 1 owner
Workplace Infrastructure					
Observation	Infrastructure Assessment	1	1	1	1

The team experienced considerable challenges in collecting endline data in Nepal due to COVID-19-related lockdowns that created delays in data collection. The delays pushed back data collection into key production windows. During these periods of time, staff were working overtime to fulfill international orders. The timing of data collection also overlapped with holiday times in Nepal during which staff traveled home to see their families. At Company A, some of the staff did not return to the work site in time to participate in the data collection. As noted above, the team was only able to secure one day at each workplace to conduct the endline research. During these visits, the team administered surveys to women who continued to work on the looms and balling stations and were only able to conduct short focus group discussions of approximately 20 minutes.

The sections below present findings from the mixed-methods comparative baseline/endline data analysis at Company A and Company B. Findings are organized and documented by predominant themes that emerged in the analyses of both partner company data.

3.2 WORKPLACE I: NEPAL COMPANY A

Below are findings from the data collected at the carpet manufacturing company, Company A. These findings reflect trends after nine months of intervention implementation and are organized by the themes that emerged during baseline/endline data analysis.

3.2.1 AWARENESS, INFORMATION, AND SELF-CONFIDENCE REGARDING MENSTRUATION

Finding 1: Increased knowledge regarding physiology of menstruation and menstrual health

At baseline, most employees at Company A were not familiar with the basic physiology of menstruation. Data from women's questionnaires at baseline revealed that only 24 percent of women identified menstruation as a natural biological process where the blood leaves the body. Mean summative scores from ten questions relating to menstrual knowledge, which could range from 0 to 8, were 5.4 for women at Company A. In FGDs, many women employees reported that they had not received formal education and that they were not aware that menstruation is part of a normal reproductive process. They had little to no knowledge about menstruation and believed that menstruation was, "God's way of distinguishing women from men." Men, including supervisors and managers, also showed limited knowledge regarding the physiology of menstruation, though some reported knowing about menstrual pain and its effects on people who menstruate, including on their ability to work while menstruating.

Women had done something wrong in their previous birth. So, it's God's way to punish women. That's why only women menstruate. – Woman employee, FGD, Baseline

In FGDs at endline, women employees reported that they understood the process of menstruation. They reported feeling that they could share the information they had gained about menstruation with their daughters – even ones who were educated – indicating that they felt empowered to share their advanced knowledge as informal educators. This gain in knowledge was reflected in the mean summative scores from the menstrual knowledge questionnaires, which increased significantly from 5.4 at baseline to 7.5 at endline. Additionally, women exhibited greater intention to seek menstruation-related health care at endline compared to baseline; several women mentioned in FGDs that if they experienced abnormal blood flow or other menstrual complications, they knew to go see a doctor. They also felt more comfortable seeing a medical doctor because of their interactions with the doctor who was part of the intervention team. Several women understood that wearing a disposable pad for a longer time than recommended could increase their risk of menstrual health and might lead to ascending infections.

In FGDs, men employees also reported that they were aware of the consequences of not changing disposable pads when recommended and shared that it was important for men to know about menstruation. They seemed to be knowledgeable about appropriate ways to dispose of used menstrual products as well, which they did not mention during FGDs at baseline. Men employees knew that some menstruating women experienced menstrual cramps during their period and reported that women on their period should not carry out heavy-duty activities like carrying heavy loads. However, they recalled an education session about pain management (implemented as part of the intervention), which taught them to offer hot water to women colleagues who experienced menstrual pain and to proactively support them in the workplace. Like their women colleagues, men employees eagerly shared the knowledge they gained about menstruation through this intervention with community and family members outside the workplace.

I was aware that when we did not conceive, we menstruate, but not much aware about the physiology, the how part of the bleeding. Now we know that it is not the impure blood that comes out. – Woman employee, FGD, Endline

It is very important for men to understand about menstruation because it helps us to take care of our female family members when they are on their period. – Man employee, FGD, Endline

Finding 2: Increased confidence in managing menstrual health and hygiene

At endline, more employees shared that they felt comfortable with managing their menstrual health and hygiene. Women reported that they felt more confident and empowered in their interactions with doctors, and felt more comfortable asking for pap smears and physical examinations for menstruation-related reasons. Responses to women’s questionnaires showed that significantly more women felt confident to manage their period in the workplace at endline than they did at baseline. Figure 2 shows that more women strongly agreed that they felt confident to manage their period at work at endline (100 percent) than at baseline (65 percent). It is possible that participating in the intervention’s menstrual education sessions contributed to women employees’ increased confidence in managing menstruation as it provided them with knowledge that they did not previously have. Moreover, the research team observed that the intervention’s strategy of making the edutainment video and other graphic BCC products at Company A itself boosted employees’ confidence around discussing MHM as they saw their own colleagues, space, and identities represented and a sense of ownership among staff, management and leadership.

Q: I feel confident to manage my menstrual period at work, including changing, disposing, or washing material. Do you [graph categories]?

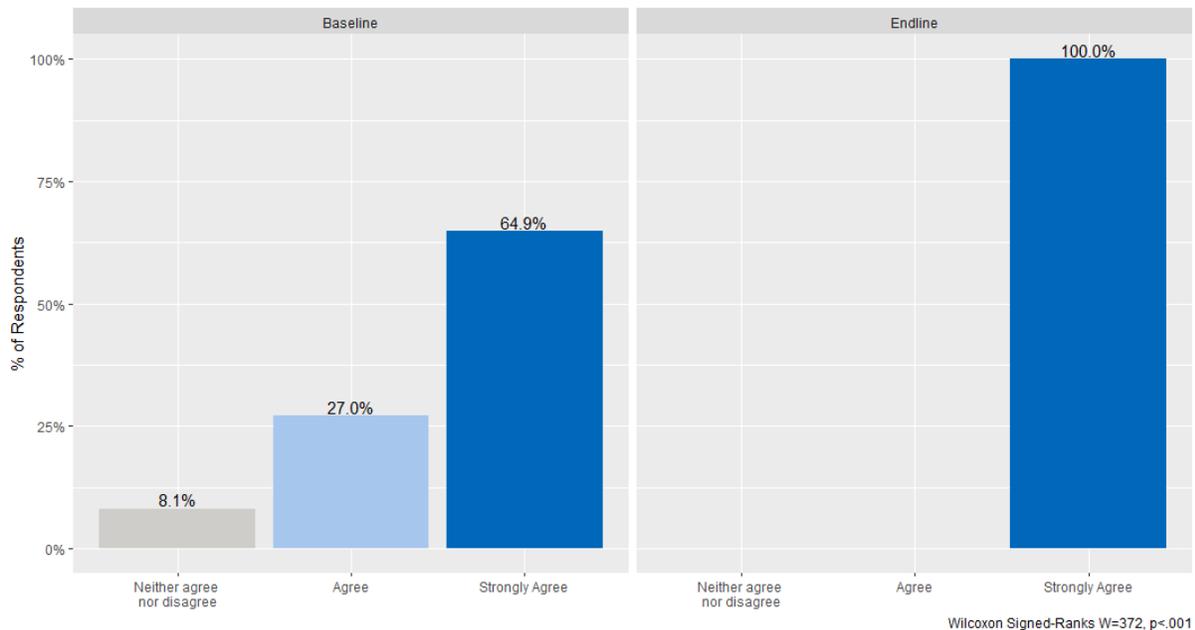


Figure 2. Changes between baseline and endline in women’s confidence to manage their menstrual period at work

3.2.2 IMPROVED ACCESS TO SAFE/HYGIENIC, AFFORDABLE, ACCESSIBLE, ACCEPTABLE, AND ABSORBENT MATERIALS OR PRODUCTS AND SUPPLIES

Finding 3: Increased product choice linked to consistent access to menstrual products at work

At baseline, safe and hygienic menstrual products were not available at the workplace and employees did not have access to them on site. In FGDs, women employees reported mostly using reusable pads and cloth when at home or at night and disposable pads when at work. Women who preferred to use cloth did so because they could reuse it for a long period of time and because it was affordable compared to disposable pads. Younger women, who were less likely to spend their disposable income on menstrual products, reported that they used reusable pads and cloth to absorb their menstrual blood in the workplace. Though many women preferred reusable pads and cloth, they were not comfortable with washing them at the workplace and instead went back to their living quarters to wash and dry these menstrual products. Additionally, women reported in FGDs that they felt somewhat comfortable asking their women colleagues for a spare disposable pad in case of an emergency. When asked in women’s questionnaires about how confident they would feel asking a colleague or another staff member for menstrual products, 30 percent of women reported that they were very confident, whereas 30 percent of women said they were just a little or not at all confident.

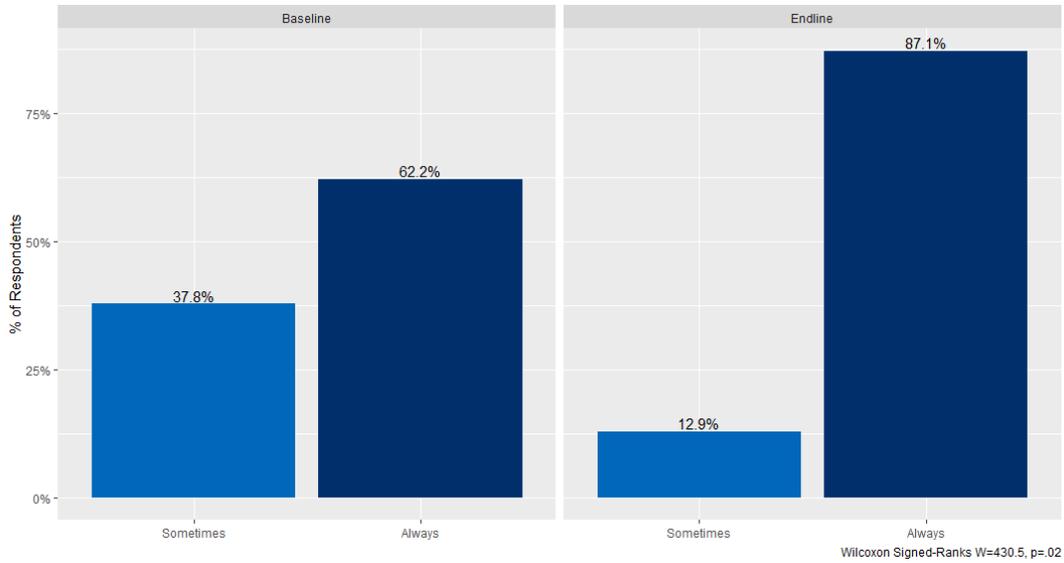
At endline, 13 percent of used *kapada* (strips of cloth cut from old garments) to absorb their menstrual blood, compared to 73 percent who did so at baseline, as shown in Table 4. More women used reusable pads at endline (16 percent) than they did at baseline (14 percent), and there was an important increase in the percentage of women who used disposable pads from baseline to endline. In endline FGDs, women reported greater and more consistent access to safe and hygienic menstrual products than they did at baseline. However, this increase was not statistically significant when captured using women’s questionnaires; at baseline, 97 percent of women shared that they had access to the materials they needed to manage their last menstrual period, which increased to 100 percent at endline. It is possible that more women perceived themselves as having access to adequate materials at baseline because they were unaware of safe and hygienic products they could use to absorb or catch menstrual blood. Many considered *kapada* to be their primary menstrual hygiene material.

Table 4. Women employees’ use of menstrual products at work, for three most commonly cited products

Products	Baseline (% of women surveyed)	Endline (% of women surveyed)
Disposable pads	75.6	90.3
Reusable pads	13.5	16.1
Cloth or Towel	73.0	12.9

Additionally, as shown in Figure 3, more women shared at endline that they always had enough of their menstrual products to change as needed (87 percent) compared to baseline (62 percent). Moreover, 84 percent of women were always able to get more menstrual products when they needed to, compared to only 62 percent who reported so at baseline, though this change is not statistically significant.

- a) Q: How often did you have enough of your menstrual materials to change them as often as you wanted to at work? Would you say [graph categories]?



b) Q: How often did you get more menstrual materials when you needed to at work? Would you say [graph categories]?

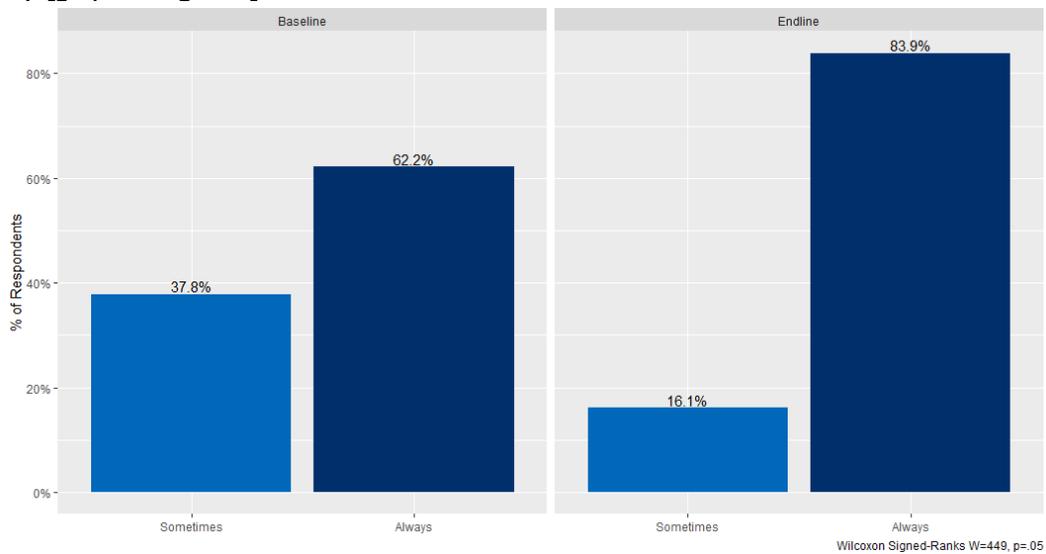


Figure 3. Changes between baseline and endline in women’s access to menstrual products

To continue services provided during the intervention, management at Company A installed a first aid box with pain management medication and a hot water bottle and placed it near the entrance of the factory. After discussions with the research team, they added disposable pads to the box for emergency use.

Finding 4: Reduced financial burden of purchasing menstrual products

In baseline FGDs, several women employees noted that disposable pads are expensive to purchase, especially given their limited expendable income. Because disposable pads are expensive, some employees could not purchase them in advance and would only buy them if necessary. Additionally, although women were comfortable with using reusable pads, they were concerned about the initial cost of acquiring these products. Overall, safe and hygienic menstrual products are not affordable for

employees and, as a result, many employees resorted to unsafe or unhygienic practices such as wearing dirty, unhygienic cloth, and overwearing menstrual products (see Finding 9: Reduced reliance on unhygienic menstrual materials and overwearing in the workplace). Data from women’s questionnaires (Figure 4) show that more women had enough money to purchase menstrual products every month at endline (85 percent) compared to baseline (19 percent). It is possible that by reducing employees’ financial burden of purchasing menstrual products for work, the intervention allowed women to spend their disposable income on menstrual products for non-work settings and for other family members as needed.

Buying pads is also a luxury item for most of the females here. Our income is very limited so we rarely buy pads. Just to save money we use old cloths during nighttime and also during weekend and disposable pads during work days. – Woman employee, FGD, Endline

Sanitary pads are provided free of cost to menstruating women at our factory. The restroom is also equipped with a dedicated bin for disposing used sanitary pad. – Man employee, FGD, Endline

Q: During the last 12 months, how often did you have money to purchase menstrual materials? Would you say [graph categories]?

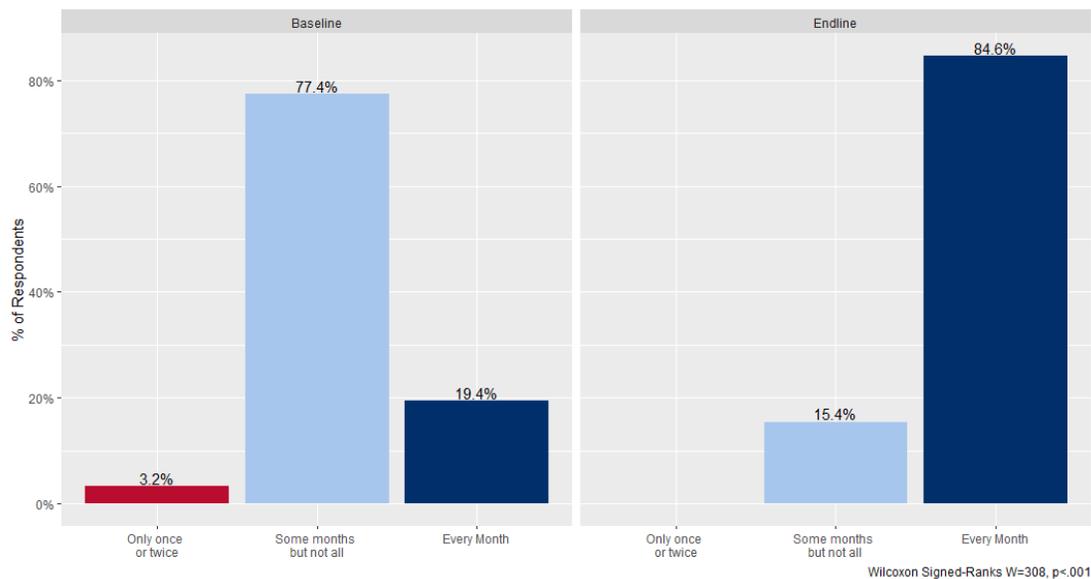


Figure 4. Changes between baseline and endline in how often women had money to purchase menstrual products

3.2.3 IMPROVED ACCESS TO SAFE AND CLEAN FACILITIES THAT ARE EQUIPPED WITH SOAP AND WATER TO BATHE ONESELF AND CLEAN OR DISPOSE OF MATERIALS

Finding 5: Improved access to safe and clean facilities

Even before the formative research, Company A owners and management were carrying out the process of improving their WASH facilities and toilet infrastructure (at the Nepal research team’s recommendation during the scoping visit in December 2019) by rebuilding women’s and men’s toilet facilities, instituting regular cleaning and maintenance of toilets, and increasing employees’ access to

soap, especially since the onset of COVID-19. An infrastructure assessment revealed that women and men employees had separate toilet facilities that were easily accessed from the main areas of the factory floor; however, they shared in FGDs that they did not know how to use these facilities properly. Though their toilets were private, women employees did not have a private space where they could wash and dry their reusable menstrual products.

Company management implemented several infrastructure upgrades and even added cosmetic flourishes like hanging flowers in toilet facilities. A privacy wall was installed between the men's and women's toilets and there was ample space to wash and dry materials outside the women's toilet area. At endline, employees had better access to safe and clean WASH facilities on site. Many employees were excited by the greatly improved toilet facilities and considered it to be the best output from the MHM intervention at Company A, though this was an unintended outcome. The infrastructure assessment—as well as FGDs and KIs with employees—revealed that toilets were much cleaner at endline than they were at baseline, with the importance of cleanliness extending to areas of the workplace beyond toilets. Several employees observed that everyone at the workplace seemed to take ownership of keeping their toilets and communal spaces clean, with men employees noting in FGDs that their menstruating colleagues' menstrual hygiene seemed to have improved as well. Toilets seemed to have less odor at endline than they did at baseline. Women employees benefited from a privacy wall and newly installed taps in toilet facilities, which allowed them a private space to wash used menstrual products and bloodstained work clothes.

You should have done this research before in our factory. We witnessed the clean toilet and washing facilities after 12 years of my work experience here at Company A. – Woman employee, FGD, Endline

Ever since the factory implemented the program on menstruation, women have started taking extra care while they are menstruating. Their practice of taking care of themselves has improved since then. – Man employee, FGD, Endline

3.2.4 SUPPORTIVE ENVIRONMENT IN THE WORKPLACE THAT ALLOWS WOMEN TO MANAGE THEIR MENSTRUATION WITHOUT FEAR OF STIGMA OR EMBARRASSMENT

Finding 6: Increased communication about menstruation between menstruating and non-menstruating employees

At baseline, there was a strong culture of silence around menstruation in general and in the workplace. Women employees, across age categories, reported in FGDs that they did not talk about their menstrual experiences or needs while at work and reported that they did not feel confident sharing MHM-related information with supervisors and men family members. They treated menstruation like a secret, reporting that they felt their menstrual experiences, challenges, or needs were a private matter and were accustomed to the culture of silence around menstruation. During baseline FGDs and monthly engagements, it was evident that women from different ethnic communities felt differently about breaking the culture of silence around menstruation; in FGDs, Tamang women did not see a need to break the silence, whereas Brahmin and Chhetri women felt that it was important to have a more open discussion about menstruation in the workplace. It is possible that Brahmin and Chhetri women were more motivated to break the silence around menstruation because they experienced more menstrual stigma since menarche.

Supervisors and managers shared that they were not able to support women employees because the women would not communicate their menstruation-related needs, experiences, and complaints. The factory manager, for example, noted in a KII that women employees would use general terms like *sanchai bahena* (“I am unwell”), instead of being open and attributing their concerns to menstruation, specifically. Some supervisors understood women’s silence around menstruation to mean they had no concerns regarding MHM. Both KIIs with supervisors/managers and FGDs with male employees revealed that contrary to women employees’ reflections, men employees were eager to break the silence around menstruation and talk about it more openly in the workplace, despite their feelings of discomfort around the issue.

In endline FGDs, women reported greater agency in talking about menstruation than they did at baseline. Many women were on the precipice of menopause and had never talked about their menstruation-related experiences, challenges, and needs at work. Women employees seemed more supportive of each other regarding MHM-related needs; in women’s questionnaires, 71 percent of women felt very confident with asking a colleague or another staff member for advice about how to manage their period at endline, compared to 32 percent of women who reported feeling very confident at baseline (Figure 5). Moreover, 74 percent of women reported feeling very confident about asking a colleague or another staff member for menstrual materials at endline, which is more than double the proportion of women who felt so at baseline (30 percent). Several men employees reported in FGDs that they felt more comfortable talking with women about menstruation at endline than they did at baseline. Some men mentioned that they even communicated with women’s families if a woman employee was experiencing menstrual pain at work and needed rest, instead of reporting her to supervisors. Men’s attitudes toward seeing menstrual bloodstains on their colleagues’ outfits had also evolved since baseline; in FGDs at endline, men expressed that they would politely approach a woman with a bloodstain to let her know about it or approach their spouse or guardian to let them know. Not all men were comfortable approaching women colleagues to talk about menstruation; however, they discussed menstruation with other men, which they did not do at baseline.

If a woman experiences severe pain, we discuss with her family members, and let her take rest. We deal with the situation amongst ourselves. We do not report to our seniors because her pain can be managed from our level and support. – Man employee, FGD, Endline

We let the menstruating woman know about the blood stain in her cloth. If she is a minor, we let her guardian know about it. But if the husband to the menstruating woman is also working in the same factory, we let him know instead, and ask him to support her to clean her stain. – Man employee, FGD, Endline

Q: If you need advice about how to manage your period, how confident do you feel asking a colleague or another staff member?

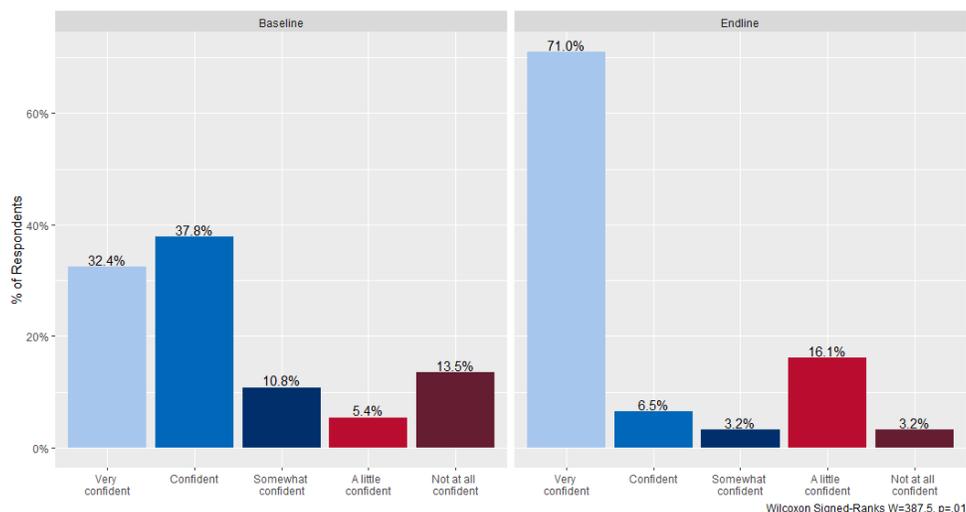


Figure 5. Changes in women’s confidence with asking colleagues or staff members for advice about how to manage their period

Finding 7: Reduced menstrual stigma

At baseline, misconceptions and misinformation about menstruation were common in the workplace. Some women and men employees reported in FGDs that they saw menstruation as the removal of dirt from the body and considered it to be impure, in part due to religious and cultural beliefs. Several employees considered menstruating women to be unclean and believed that menstrual pain was communicable. Women and men at the workplace, including supervisors, often referred to menstruation as a woman’s issue. “Although men employees did not disclose any clear discrimination against menstruating employees in their FGDs, men shared that they were reluctant to go near menstruating women. Additionally, men supervisors and employees would assume that women were menstruating if their women colleagues complained of a headache or back pain. Employees were also influenced by menstrual stigma that extended beyond the workplace. For example, many employees believed that women should not worship, go to the temple, or cook while menstruating.

When the wife is menstruating, the husband is also not allowed to do Rudri puja, and pitra shraddha, no religious functions during periods. – Woman employee, FGD, Baseline

I have experienced that even the plant was dead by drying gradually once a menstruating woman touched the plant. – Man employee, FGD, Baseline

At endline, many employees commended their colleagues for creating a less stigmatizing and more supportive environment for menstruating colleagues. In endline FGDs, women shared that they were less likely to mock other women for menstruating after the intervention than they were before. They reported that the culture of fear and stigma around menstruation had improved and that women were more supportive of each other. In women’s questionnaires, approximately 48 percent of women at endline felt very confident about reporting to a manager or supervisor when someone bullied, teased, or harassed them about menstruation, compared to 35 percent at baseline (Figure 6). Women reported a tension between wanting to talk about menstruation more openly and continuing to respect

menstruating employees' privacy; though some did not want to talk about their menstrual experiences in a public arena, they appreciated the intervention's efforts to diffuse the culture of silence around menstruation (see Finding 6: Increased communication about menstruation between menstruating and non-menstruating employees). In FGDs, men employees credited the intervention with showing them that menstruation is not just a woman's issue and that it affects others in the family and in the workplace. They expressed that they would not treat menstruating women differently because everyone talked about menstruation as a normal phenomenon.

Menstruation is a normal nature-created phenomena that a woman experiences once in a month after she reaches a reproductive age. We take it normally. However, conventional mindset among people have barred menstruating women from participating in some activities like religious ritual. – Man employee, FGD, Endline

Now we are aware that doing household chores during periods is also normal. We now cook food and don't have to wait for the male members to serve food for us. But still going to temple and doing puja is not [allowed] yet. – Woman employee, FGD, Baseline

A menstruating woman is not discriminated [against] at our factory. She is treated like she is treated when she is not on her menstrual period. Everyone takes menstruation as a normal process, and do not actually make a fuss about it. – Man employee, FGD, Endline

In the past, most people used to take menstruation has something very dirty but these days, even the people of older generation are taught about what menstruation actually is. Thus, menstruating women are not discriminated. – Man employee, FGD, Endline

Q: How confident do you feel reporting someone who bullied/teased/harassed you about menstruation to a supervisor or manager?

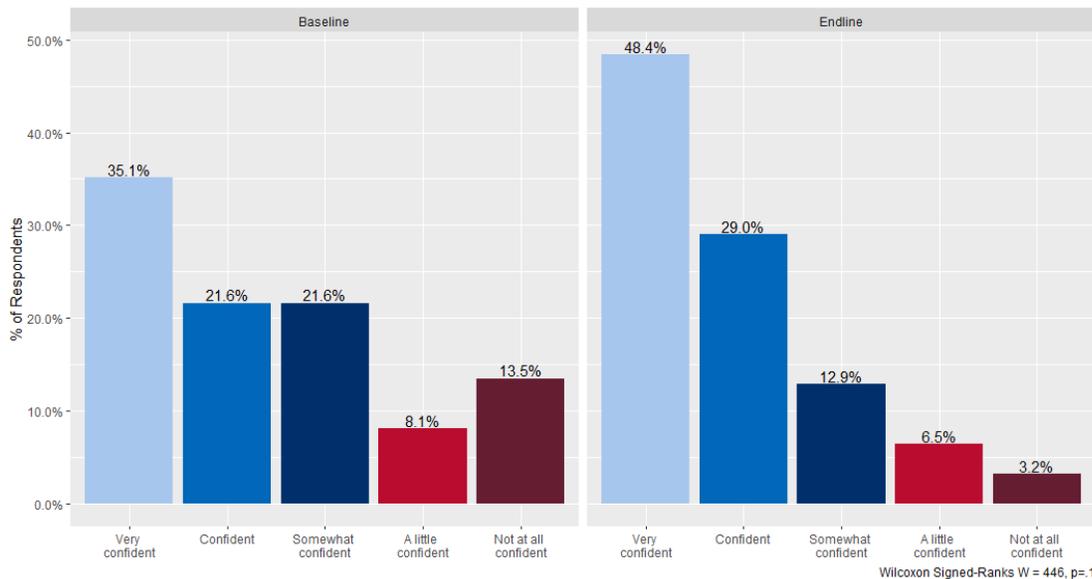


Figure 6. Changes between baseline and endline in women's confidence with reporting menstruation-related harassment

Finding 8: Greater gender equality in the workplace, including reported freedom and empowerment among menstruating employees

In baseline FGDs, women employees shared that they wanted to see more women in supervisory and managerial roles, as all their supervisors and managers at Company A were men. Women were not comfortable with approaching men supervisors to discuss their MHM-related needs and wished that they could consult a woman supervisor instead. No other data were collected regarding employees' perceptions about their agency, empowerment, and gender dynamics in the workplace at baseline.

At endline, however, many employees expressed that women felt greater agency, self-efficacy, and empowerment regarding menstruation in the workplace. Women reported in FGDs that they felt more confident about seeking menstrual healthcare and asking supervisors for time off to go see a doctor. By breaking the silence around menstruation (see Finding 6: Increased communication about menstruation between menstruating and non-menstruating employees), women felt more comfortable talking with other women, men colleagues, supervisors, and owners about their MHM-related concerns. Women and men employees reported in FGDs that they felt a stronger sense of community and mutual respect with each other, despite ethnic differences. The research team observed that employees took "ownership" of MHM as an issue that was important to them and that they advocated for a more MHM-friendly workplace as a group. Although some tasks at Company A are performed by men or women only, the MHM intervention seemed to create a common ground for men and women to learn, discuss, and grow together. It is possible that this improved sense of camaraderie and belonging at the workplace, in addition to a more supportive work environment for menstruating employees, improved women employees' job satisfaction. In women's questionnaires at endline, 52 percent of women reported that their satisfaction with their job had improved compared to last year, as opposed to 22 percent who reported improved job satisfaction at baseline (Figure 7).

Q: Compared to this time last year, would you say your satisfaction with your job has improved, stayed more or less the same, or worsened, overall?

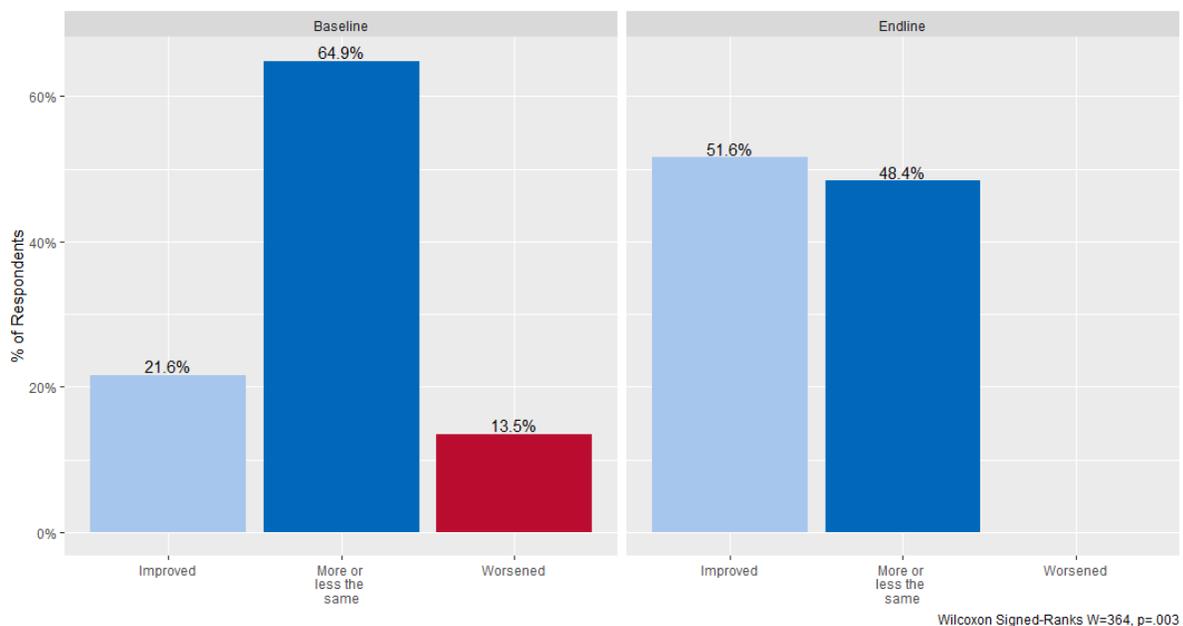


Figure 7. Changes between baseline and endline in women's job satisfaction

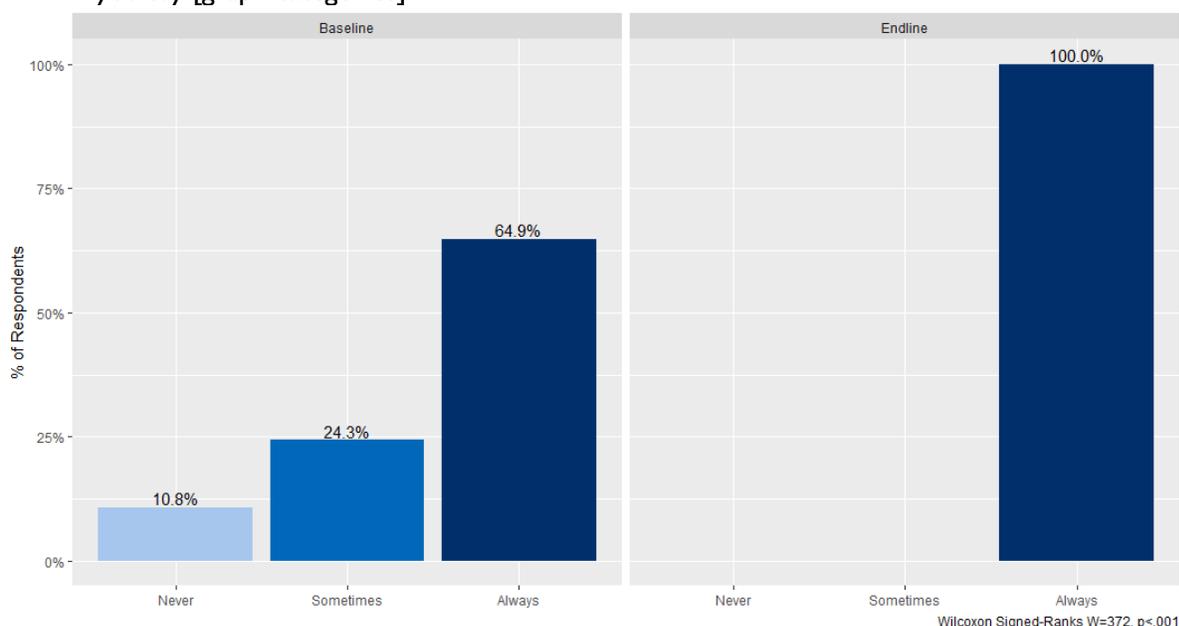
3.2.5 IMPROVED MHM PRACTICES

Finding 9: Reduced reliance on unhygienic menstrual materials and overwearing in the workplace

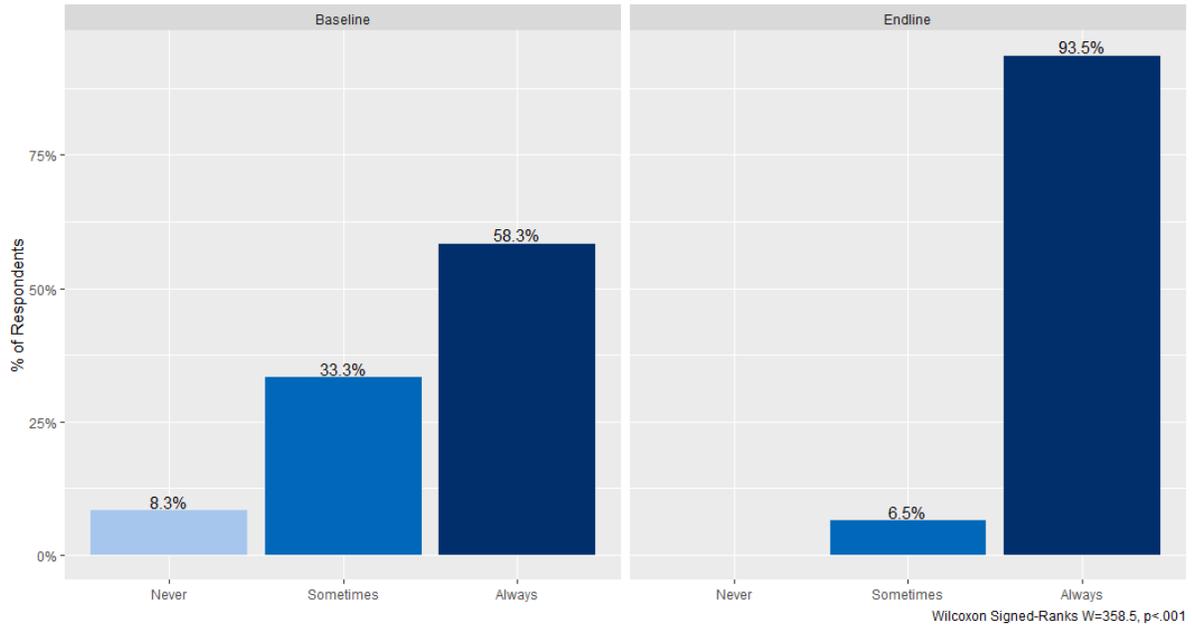
At baseline, safe and hygienic menstrual products were not affordable for employees (see Finding 4: Reduced financial burden of purchasing menstrual products) and, as a result, many employees resorted to unsafe or unhygienic practices. Women employees reported in FGDs that they either used *kapada* (old cloth) or used a pad for longer than recommended to get more use out of it, even if it caused them physical discomfort. Some women reported that they wore the same disposable pad all day and did not change it until it they considered it to be “full.” Several women reported that they had experienced urinary tract infections and other infections resulting from overusing or misusing disposable menstrual products. Moreover, women employees at the workplace reported that they would share underwear and not wash their underwear for up to four days.

In endline FGDs, women employees reported that they knew not to wear the same disposable pad for longer than a few hours, otherwise they would increase their risk of infections and irritation. In women’s questionnaires at endline, 100 percent of women reported that they were always able to change their menstrual products when they wanted to, a stark increase from 65 percent of women who reported being able to do so at baseline (Figure 8). Women reported in FGDs that they knew not to share underwear or wear underwear that had been worn for more than one day or not been washed recently. Moreover, at baseline, employees’ reliance on unclean and unsafe menstrual products contributed to their discomfort and dissatisfaction with their products in the workplace. At endline, after having greater access to clean and safe menstrual products, women reported less discomfort with their menstrual products and less dissatisfaction with their products’ cleanliness compared to baseline (Figure 8).

- a) Q: How often were you able to change your menstrual materials when you wanted to? Would you say [graph categories]?



b) Q: How often did you feel that your menstrual materials were comfortable? Would you say [graph categories]?



c) Q: How often were you satisfied with the cleanliness of your menstrual materials? Would you say [graph categories]?

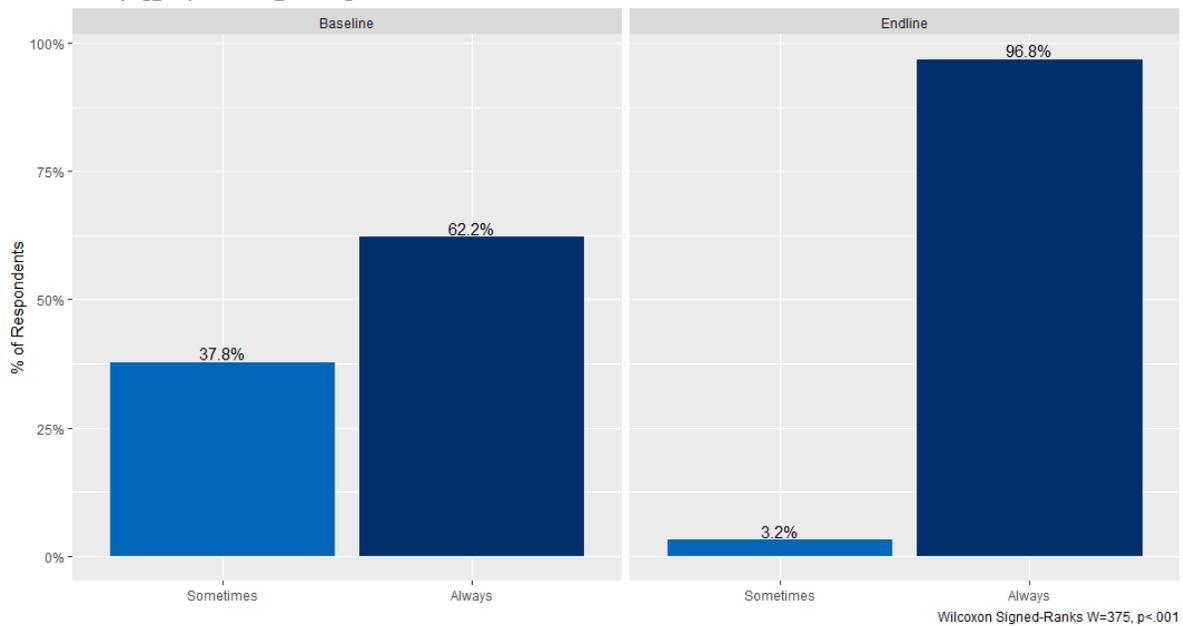


Figure 8. Changes between baseline and endline in women’s reliance on unsafe menstrual products

Finding 10: Increased access to menstrual products at work linked to reduced menstruation-related stress

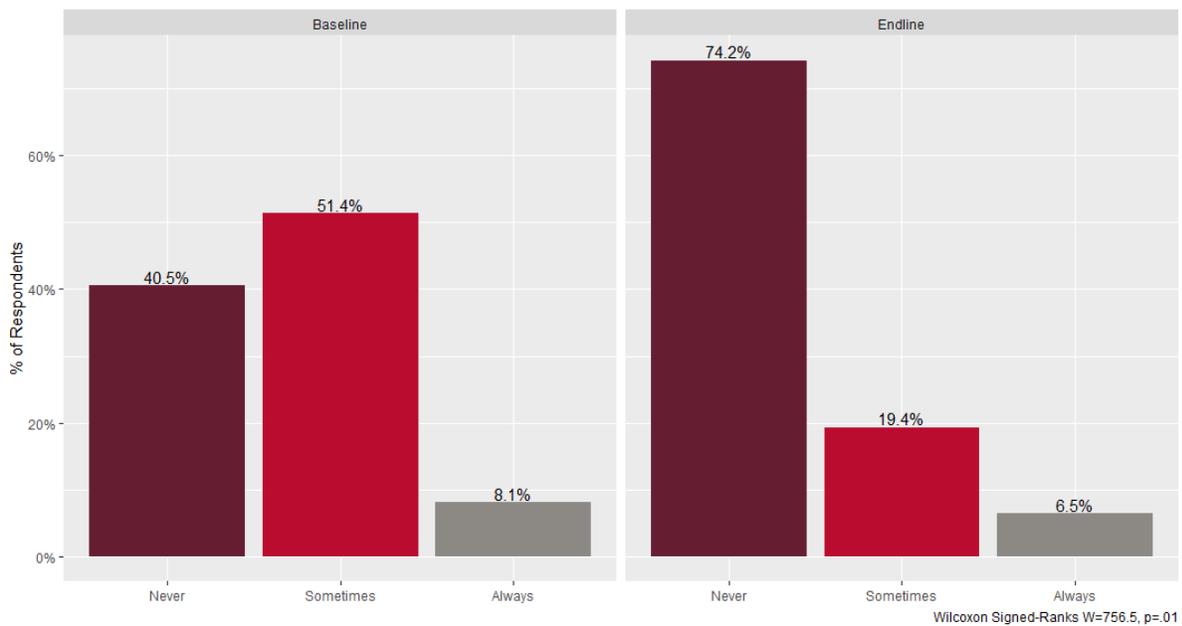
Data from women’s questionnaires (Figure 9) showed that over time fewer women worried about how they would get more menstrual products at work if they ran out. At endline, 74 percent reported that they never worried compared to 41 percent at baseline. Additionally, fewer women worried that their

menstrual products would allow blood to pass through to their garments at endline than they did at baseline. More women always thought that their menstrual products were comfortable at endline (94 percent) than at baseline (58 percent), a statistically significant change important to consider because product-related discomfort can contribute to employees' psychosocial stress in the workplace. More women were always satisfied with their menstrual products at endline (97 percent) than at baseline (62 percent), which was also a statistically significant change.

We know that we should not use the same pad for more than six hours, and also for the reusable to soak it in the detergent right after use, [instead of] waiting to wash until it is dark at night. – Woman employee, FGD, Endline

If a menstruating woman does not focus on proper menstrual hygiene, then she could experience negative health effects. She should not use a single pad for a long period of time. – Man employee, FGD, Endline

- a) Q: How often did you worry about how you would get more menstrual materials at work if you ran out?



b) Q: How often did you worry that your menstrual materials would allow blood to pass through to your outer garments?

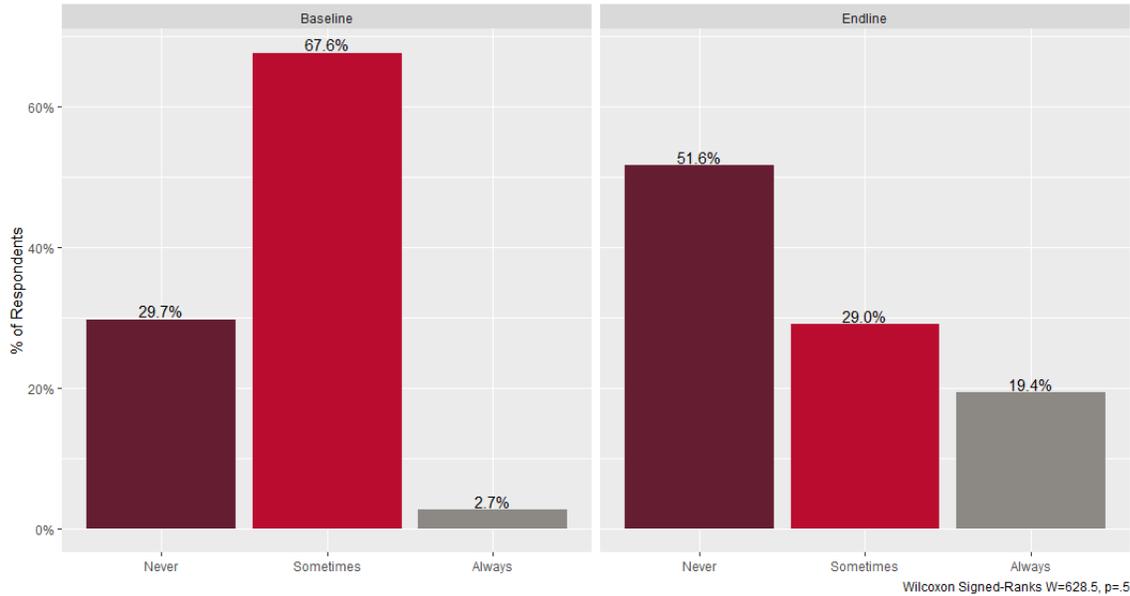


Figure 9. Changes in women’s menstrual product-related anxiety at work

Finding 11: Improved menstrual product disposal

Women and men employees reported in baseline FGDs that women left used disposable pads in bathrooms or flushed them down the toilet, which often clogged them. The cleaning staff shared that he had, in the past, unclogged toilets that were blocked by used disposable pads. Employees did not have regular access to soap or toilet paper because management feared that it would contribute to the clogging of toilets. The intervention included education sessions on proper use and disposal of menstrual products; they chose to continue using the waste management bins that had already been placed near the restrooms.

Overall, menstrual product disposal improved at endline compared to baseline. Employees shared in endline FGDs that they separated used disposable pads into bags meant for municipal drop-off instead of throwing them into a regular trash dump site, both on the factory floor and in their living quarters. Also, women employees reported in their endline questionnaires that they were less likely to throw used disposable pads in toilet facilities, which reduced toilet blockages (and resulting costs). Figure 10 shows that more employees disposed of their used menstrual materials in a bin in the latrine and in a bin at the company at endline compared to baseline.

Q: Where did you most often dispose of your used menstrual materials?

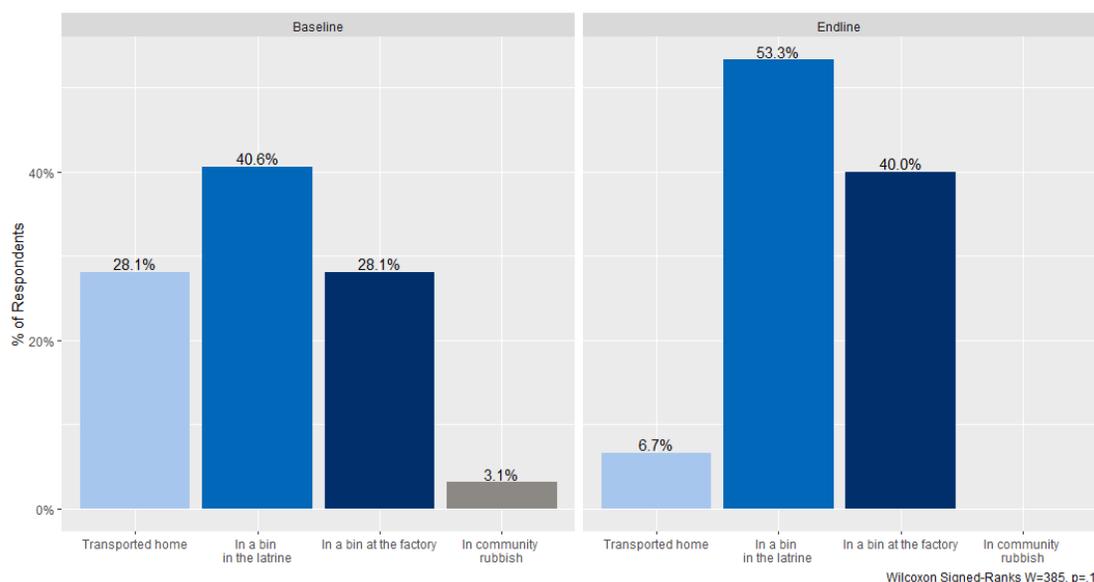


Figure 10. Changes between baseline and endline in where women most often disposed of their used menstrual products

3.2.6 IMPACTS ON WOMEN EMPLOYEES AND THEIR EMPLOYERS

Finding 12: Reduced absenteeism among menstruating employees

In baseline FGDs, many women employees reported that they would leave the workplace to purchase emergency pads when they needed them. However, when they left work to purchase menstrual products from the shop, they covered up their reason for leaving by attributing their absenteeism to headaches or stomach aches instead of menstruation. Supervisors shared in KII that most women did not have access to safe and hygienic menstrual products in the workplace, which necessitated them bringing their own products from home. This also meant that women would go home during their break to acquire menstrual products, further contributing to menstruation-related absenteeism.

In endline FGDs, employees observed that absenteeism decreased from baseline to endline. Men employees shared that their women colleagues no longer went home during the work day as frequently as they did at baseline to change or find their menstrual products. Instead, women used workplace toilets to change their menstrual products and resumed working sooner than they would if they had left the workplace to go home. Although data from FGDs and KIIs indicate reductions in absenteeism, data from women’s questionnaires show modest decreases in days and hours missed per woman due to menstruation-related reasons (Table 5). Despite reductions in absenteeism, data from women’s questionnaires showed that 57 percent of women felt comfortable to a large extent with telling supervisors that they needed to leave work for menstruation-related reasons, compared to 30 percent of women who felt so at baseline (Figure 11).

When [women employees used to] go home, they [would] change pads and also take a little rest before coming back to work. When [they] go to factory toilet [now], it’s faster and they come back to work quicker. – Man employee, FGD, Endline

Table 5. Changes between baseline and endline in women employees' absenteeism

	Baseline Mean	Endline Mean	T-statistic	P-value
Mean days missed by women employees due to menstruation-related reasons, per woman	0.3 days	0.0 days	1.8	0.08
Mean hours missed by women employees due to menstruation-related reasons, per woman	0.9 hours	0.2 hours	2.3	0.03
Percentage of women who missed part of a workday due to menstruation-related reasons	32%	9%	2.4	0.02

Q: Do you feel comfortable telling your supervisors that you need to leave work for menstruation-related reasons? Would you say that you feel comfortable [graph categories]?

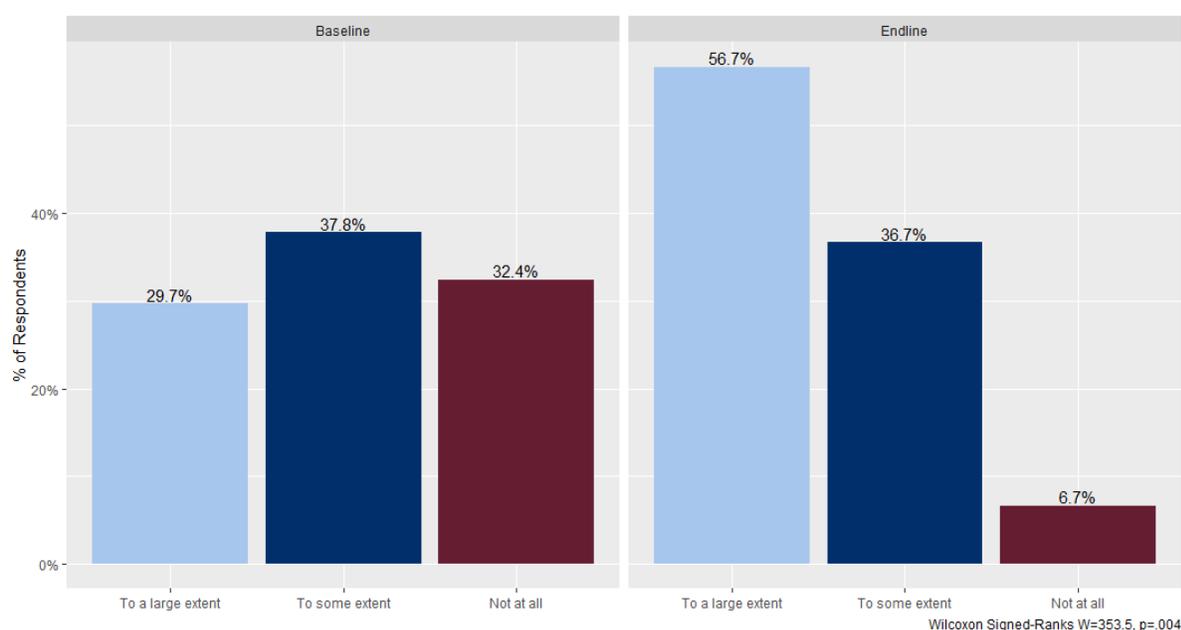


Figure 11. Changes in women's comfort level with telling their supervisors that they need to leave work for menstruation-related reasons

Finding 13: Improvements in productivity and performance

In baseline FGDs, employees noted that menstruation-related absenteeism impacted women employees' productivity. Men employees shared in baseline FGDs that menstruation seemed to affect their women colleagues' concentration and their income due to lower production. As mentioned above, women shared that they often took time off from work during their menstrual cycle to tend to their MHM-related needs (see Finding 12: Reduced absenteeism among menstruating employees). This impacted their colleagues because employees worked alongside each other on the same loom; if one employee were to leave a loom, it would reduce others' ability to continue working and meet production targets as planned. To compensate for their reduced productivity, women employees (and, sometimes, colleagues who worked on the same loom as them) would come early or work on weekends to meet their production quota. Supervisors reported in KIs that they were supportive of this system and did

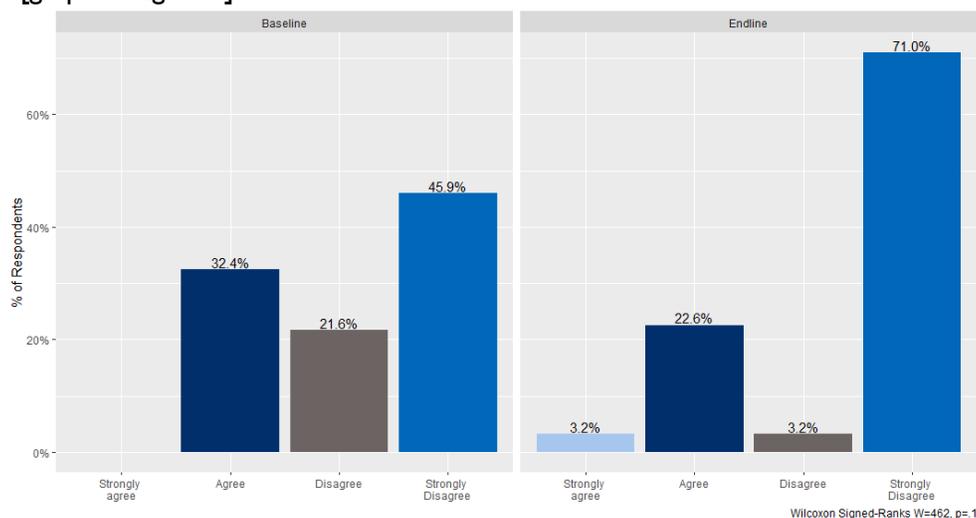
not pressure menstruating women to continue working if they did not want to. However, women who took time off while menstruating compensated for missed targets when they felt better.

At endline, men employees noticed improvements in productivity and work performance, which they attributed to reduced absenteeism from menstruating colleagues; however, some men said that menstruating women tolerated negative impacts of menstruation on their work performance (such as menstrual pain) and continued their work to avoid losing wages from not meeting production targets. Women employees observed some improvements with regard to their own presenteeism. In women’s questionnaires, 71 percent of women strongly disagreed that the stresses of their job were much harder to handle because of their period at endline, an increase from 46 percent who strongly disagreed at baseline (Figure 12). There was a slight increase in the proportion of women who strongly agreed that they were able to finish hard tasks at work despite their period, increasing from 73 percent at baseline to 84 percent at endline. There were similarly slight increases in the proportion of women who: strongly agreed that they were able to focus on achieving their goals despite their period; strongly agreed that they felt energetic enough to complete all of their work despite their period; rated the quality of their work as excellent while menstruating; and felt very confident that they could meet their personal production targets on time while menstruating at work (Figure 12). Many employees were hesitant to give up work time to participate in the intervention and its data collection efforts, as they wanted to meet their production targets and not miss out on production-related wages.

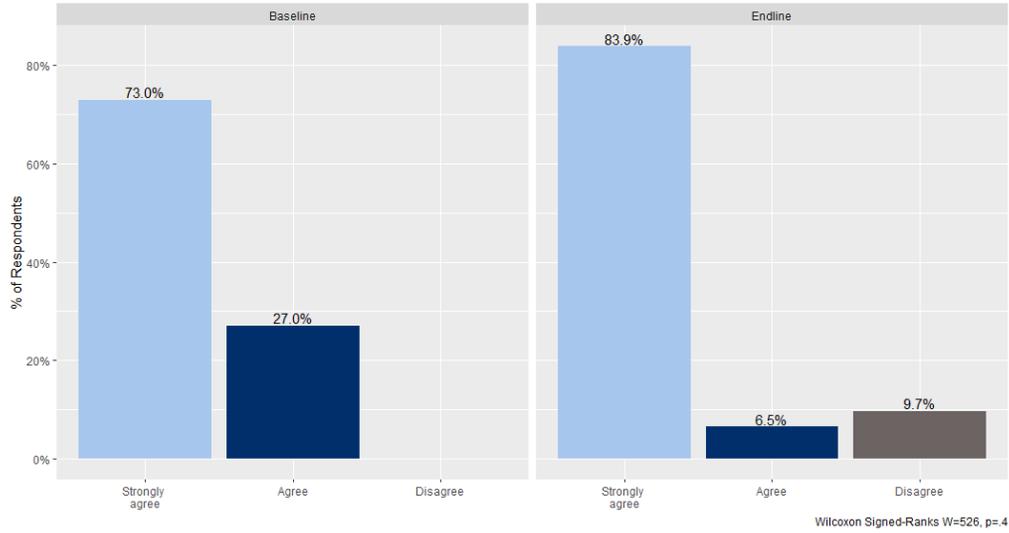
For us, less work means less money, so despite pain and cramps, we want to be present at the work spot and try our best to engage our mind to work rather than to the body. Now we are confident enough to share our issue to the manager and enjoy a short rest break and get back to work when we feel better. – Woman employee, FGD, Endline

Women here work on wages. They do not get paid when they take a leave from work. Thus, if a woman experiences a slight pain, she tolerates it and continues her work. She takes support from her family members—especially her husband—in such circumstances. – Man employee, FGD, Endline

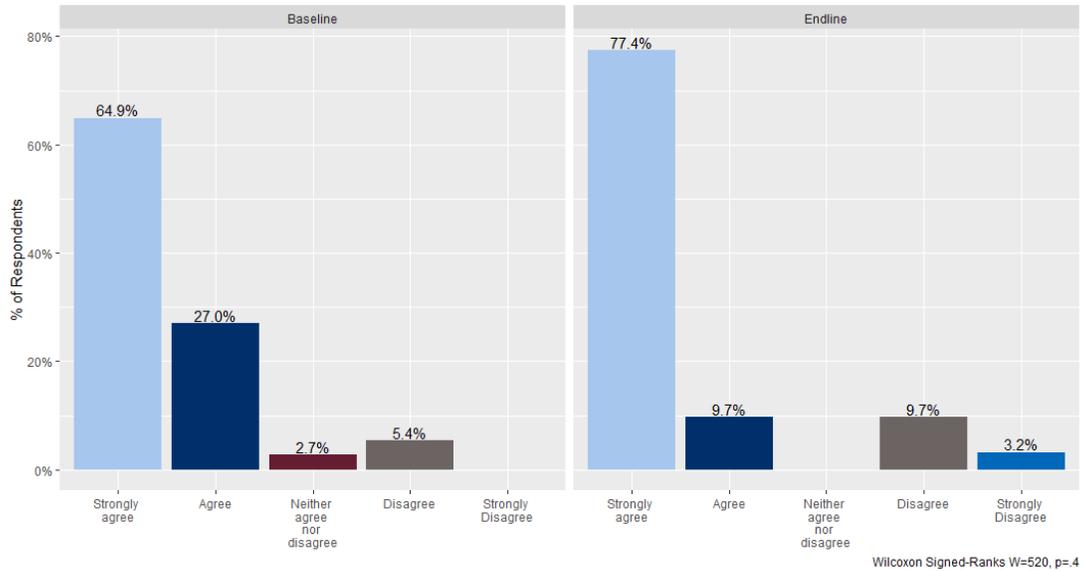
- a) Q: Because of your menstrual period, the stresses of your job were much harder to handle. Do you [graph categories]?



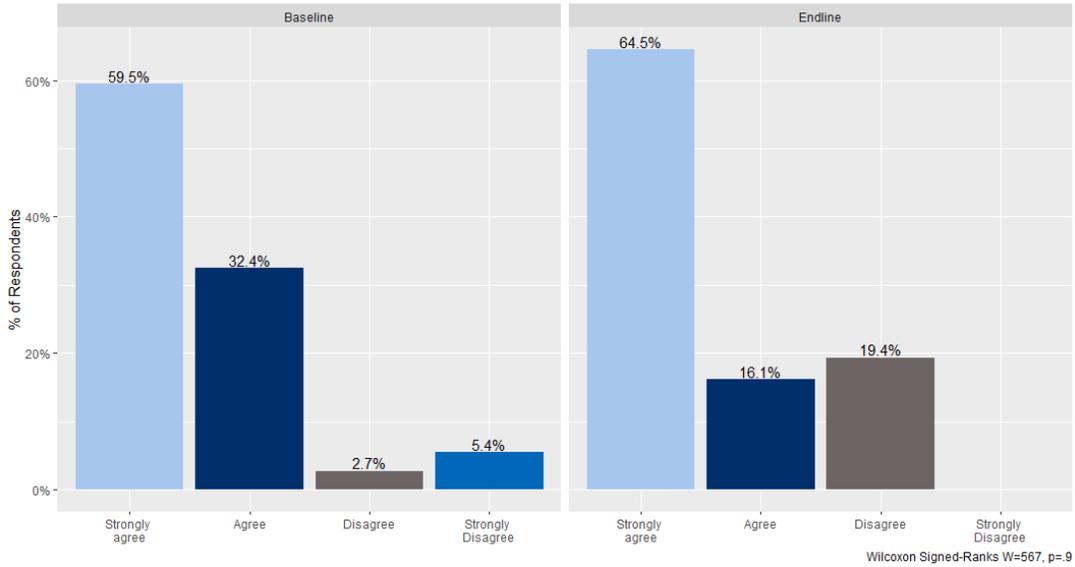
b) Q: Despite having your menstrual period, you were able to finish hard tasks in your work. Do you [graph categories]?



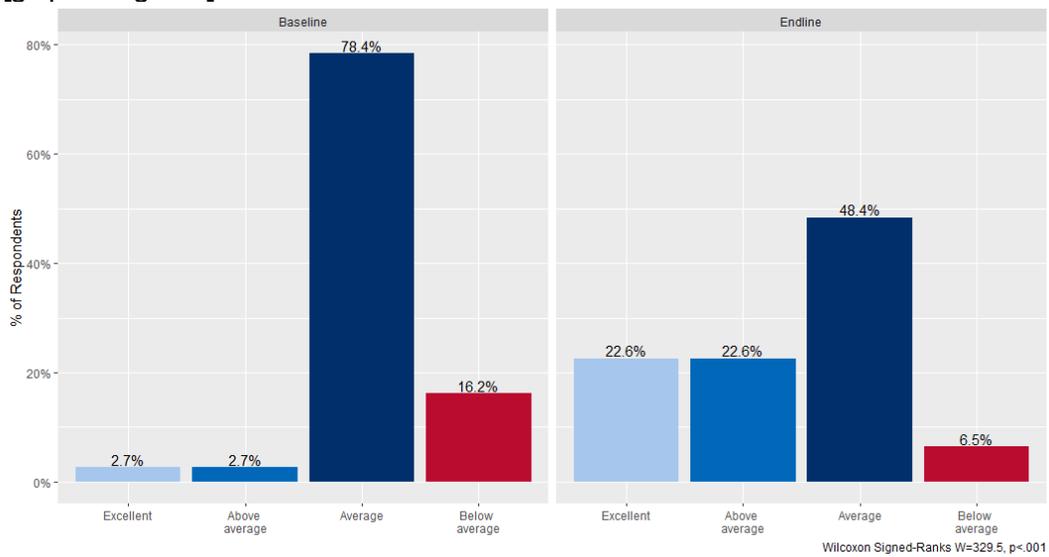
c) Q: At work, you were able to focus on achieving your goals despite your menstrual period. Do you [graph categories]?



d) Q: Despite having your menstrual period, you felt energetic enough to complete all your work. Do you [graph categories]?



e) Q: How would you rate the quality of your work while on your period? Would you say it is [graph categories]?



- f) Q: How confident do you feel that you can meet your personal production targets on time while on your period at work?

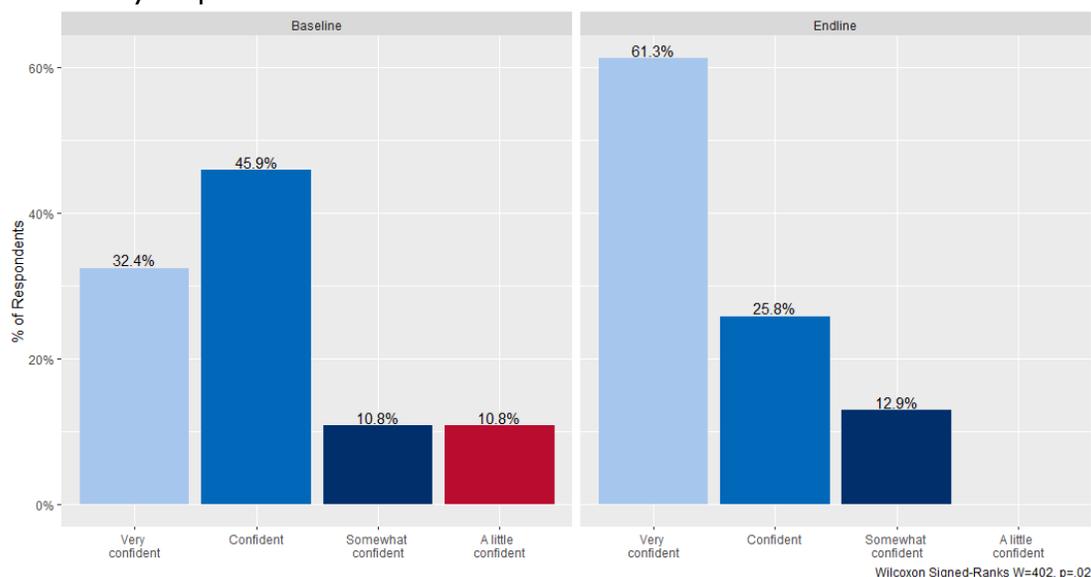


Figure 12. Changes between baseline and endline in women’s productivity, performance, and presenteeism

3.3 WORKPLACE 2: COMPANY B

Below are findings from the data collected at the carpet manufacturing company, Company B. These findings reflect trends after nine months of intervention implementation and are organized by the themes that emerged during baseline and endline data analysis.

3.3.1 AWARENESS, INFORMATION, AND SELF-CONFIDENCE REGARDING MENSTRUATION

Finding I: Increased knowledge regarding physiology of menstruation

At baseline, there was a noticeable knowledge gap related to menstruation and the menstrual cycle among employees at Company B. In baseline FGDs, women employees understood the average duration and frequency of menstrual cycles, but neither women nor men understood how and why menstruation occurs, why menstruation can be irregular, the role of hormones, or how the experience can differ from person to person. The knowledge gap was particularly pronounced among the younger employees, who shared during FGDs that this was their first time speaking about menstruation in public. Baseline FGDs revealed that employees at Company B were younger than those at Company A and had less experience managing their periods. Additionally, many men at Company B were still unmarried and had not yet learned about menstruation.

During endline FGDs, both women and men stated that they understood the physiology of menstruation as a result of the intervention and view menstruation as a natural physical process.

Now we also feel we know everything about our body and uterus. – Woman employee, FGD, Endline

In 2019, a girl from an NGO gave a session on MHM. She shared that inside our body if the size of the egg became too big, it bursts and we bleed, but we realized during this program that this was wrong information. – Woman employee, FGD, Endline

Data from the women’s questionnaire corroborates the change in knowledge regarding menstruation. At baseline, only 25 percent of women described menstruation as a “natural biological process where the blood leaves the body” as compared to 95 percent at endline. Similarly, 76 percent of respondents knew about the typical length of a menstrual cycle at baseline compared to 98 percent at endline.

Finding 2: Increased knowledge related to menstrual products, including how to use and dispose of them

Baseline FGDs revealed that most women employees did not know which menstrual products are safe, absorbent, and hygienic to use. They also did not know how often to change, wash and dry, or dispose of products. Prior to the intervention, women at Company B had not heard of reusable sanitary pads. They were only aware of disposable pads and *kapada*. Men co-workers, supervisors, and managers were also only aware of disposable pads and *kapada*. There was a pronounced lack of knowledge among the younger women at Company B, many of whom traveled from remote parts of Nepal to work in Kathmandu. This intervention was their first exposure to menstrual health education. The high percentage of younger women at Company B presented less possibilities for young women to learn about MHM from older peers.

As with Company A, education sessions, BCC posters, playing cards, and the edutainment video presented information on menstrual health and menstrual products in Company B (including use, laundering, and disposal). The education and BCC materials used a pictorial approach appropriate for a low literacy population. During the endline FGDs, women mentioned that the education and BCC materials allowed them to be able to easily understand the various aspects of MHM, including physiology, and hygiene and sanitation related to MHM.

The women are illiterate, so it took a little more time to understand what [the intervention team was] saying for the first two months. Now we realized you are talking about our issues and we are trying to implement the learnings from the session. – Woman employee, FGD, Endline

During endline FGDs, women stated that they were now aware that reusable pads were an option for absorbing menstrual blood. Young women stated that they were initially reluctant to use reusable pads at the beginning of the intervention and preferred using disposable pads instead. This reluctance came from not knowing how to use and never having used reusable pads and the fear that like *kapada* (old cloth), reusable pads would leak and cause them embarrassment. Women reported that the education and BCC sessions, particularly the demonstration on how to use reusable pads and other sessions on menstrual products were all essential as they learned proper use, maintenance, and storage of products.

It is important to note that during baseline FGDs, women shared that they felt confident in their ability to change, wash, and dispose of menstrual products at work; however, it became clear that their confidence was based on misinformation and led to unhygienic practices like using a pad for 12 hours and then hiding it between the ceiling and the door of the toilet to wash it at night when no men workers were near the tap (further details in 3.3.5 Improved MHM practices). At endline, nearly the same proportion of women (58 percent) “strongly agreed” that they felt confident to manage their periods at work compared to women at baseline (60 percent) (see Figure 13); however, after the intervention, their confidence reflected new knowledge and menstrual practices that were safe and hygienic. Company A had a starker contrast from baseline to endline in the same category; more women “strongly agreed” that they felt confident to manage their menstruation at work at endline (100 percent) than at baseline (65 percent) (see Figure 2).

Q: I feel confident to manage my menstrual period at work, including changing, disposing, or washing material. Do you [graph categories]?

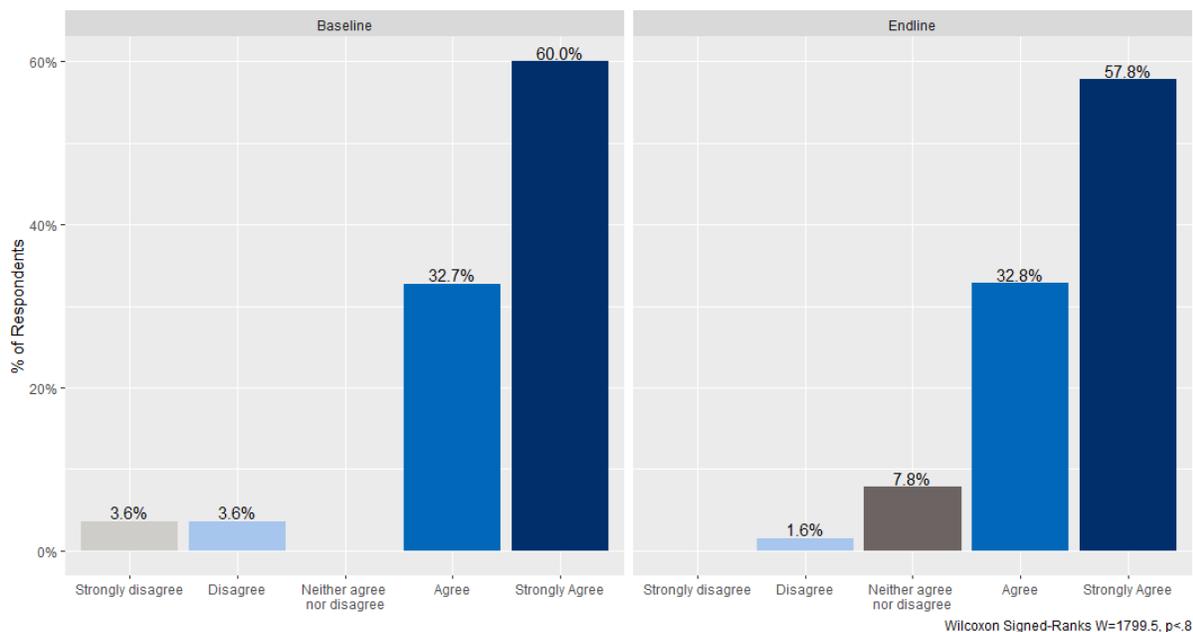


Figure 13. Changes between baseline and endline in women’s agreement that they feel confident to manage their menstrual period at work, including changing, disposing, or washing materials

3.3.2 ACCESS TO SAFE/HYGIENIC, AFFORDABLE, ACCESSIBLE, ACCEPTABLE, AND ABSORBENT MATERIALS OR PRODUCTS AND SUPPLIES

Finding 3: Minimal change in product choice despite consistent access to menstrual products at work

During baseline FGDs, women employees reported during FGDs that they used disposable pads while at work, because pads were more comfortable and less likely to leak, and *kapada* at home. They used *kapada* at home because they could not afford to use pads at all times. Women shared that they often had to ask relatives and friends for old cotton saris and cut them into pieces to make *kapoda*. However, after being educated on the use and maintenance of reusable pads, as well as the provision of *Maryadit Karyasthal* bags (which included reusable pads), women started to use reusable pads instead of *kapada* during the night. Data from the women’s questionnaire shows products preferred and used at work (Table 6). There was little change between baseline and endline in the products that they reported using at work, with most respondents using disposable pads (89 percent at baseline and 95 percent at endline). The proportion of women reporting use of reusable pads increased from baseline (7 percent) to endline (14 percent), with usage of cloth declining slightly from baseline (18 percent) to endline (14 percent). Changes in menstrual product use at work at Company A were as follows: a 14.7 percentage increase in use of disposable pads, a 2.6 percentage increase in use of reusable pads, and a 60.1 percentage point reduction in use of cloth at endline compared to baseline (see Table 4).

Table 6. Women employees’ use and preference of menstrual products at work, for three most commonly cited products

Workplaces	Used		Preferred	
	Baseline	Endline	Baseline	Endline
Cloth or Towel	18%	14%	11%	3%
Disposable Sanitary Pad	89%	95%	87%	95%
Reusable Sanitary Pad	7%	14%	7%	6%

The women’s questionnaire also requested information from women about whether they had access to the materials needed for managing their last menstrual period. Figure 14 shows little change in the perceived accessibility to materials between baseline and endline, with a high proportion of women responding affirmatively at both time points. A possible explanation for this lack of change in access to materials between baseline and endline is that respondents were able to manage their periods with whatever materials they were able to find.

Q: Did you have access to the materials you needed for managing your last menstrual period?

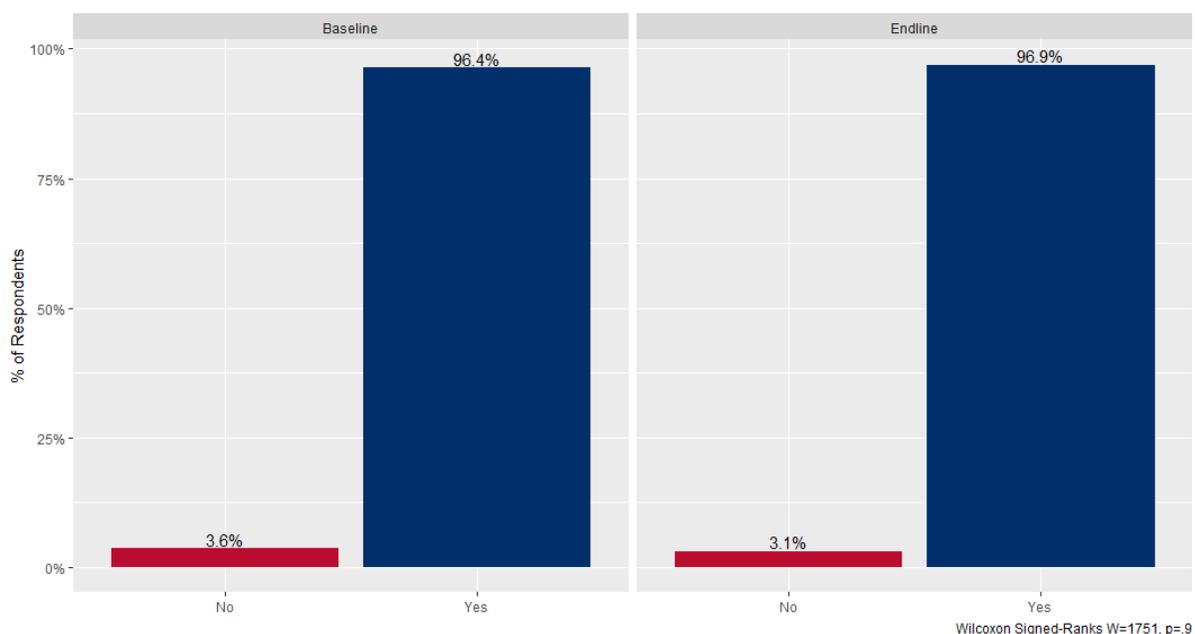


Figure 14. Access to materials

Similarly, there was little change between baseline and endline in respondents having enough menstrual materials to change them as often as they wanted to as show in Figure 15.

Q: How often did you have enough of your menstrual materials to change them as often as you wanted to at work? Would you say [graph categories]?

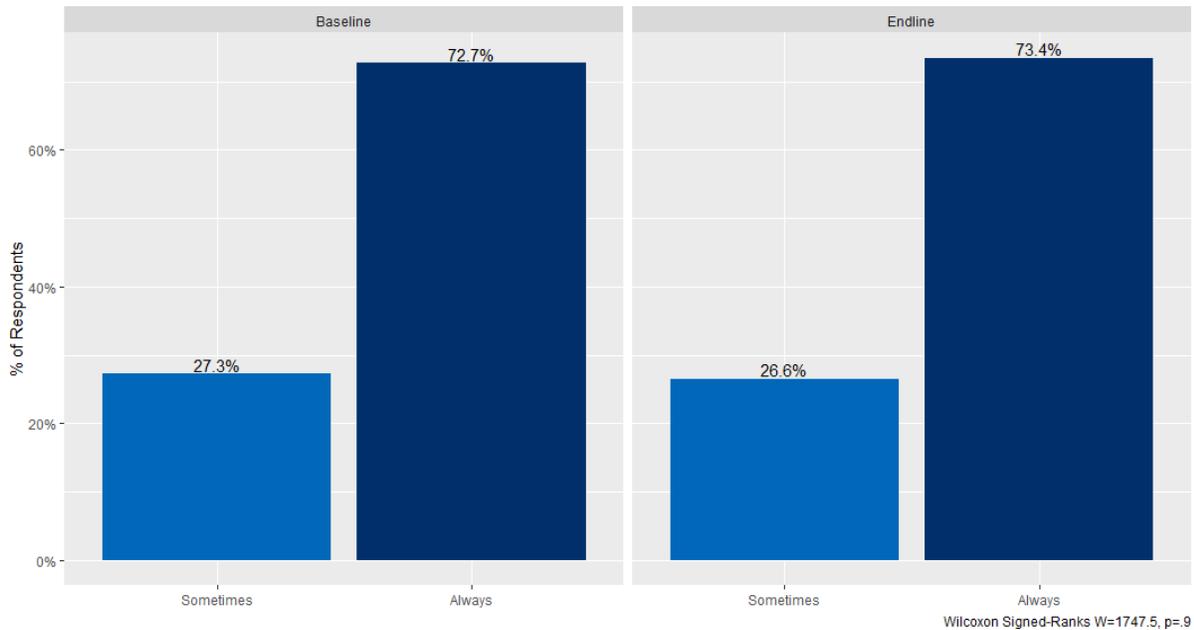


Figure 15. Sufficient materials to change them when you wanted

Over 25 percent of women reported only sometimes having enough menstrual materials to change when they wanted at both baseline and endline. The lack of change is surprising given the distribution of the *Maryadit Karyastal* bags at the intervention launch and the free provision of disposable pads at Company B throughout the intervention. This diverges from findings from Company A, where more women always had enough of their menstrual materials to change them as often as they wanted to at work at endline (87 percent) compared to baseline (62 percent) (see Figure 3). Similarly surprising are the data in Figure 16. Although the proportion of women who can always get more menstrual materials when needed increased from baseline (67.3 percent) to endline (76.7 percent), the increase was not as large as expected, considering the provision of menstrual materials.

Q: How often did you get more menstrual materials when you needed to at work? Would you say [graph categories]?

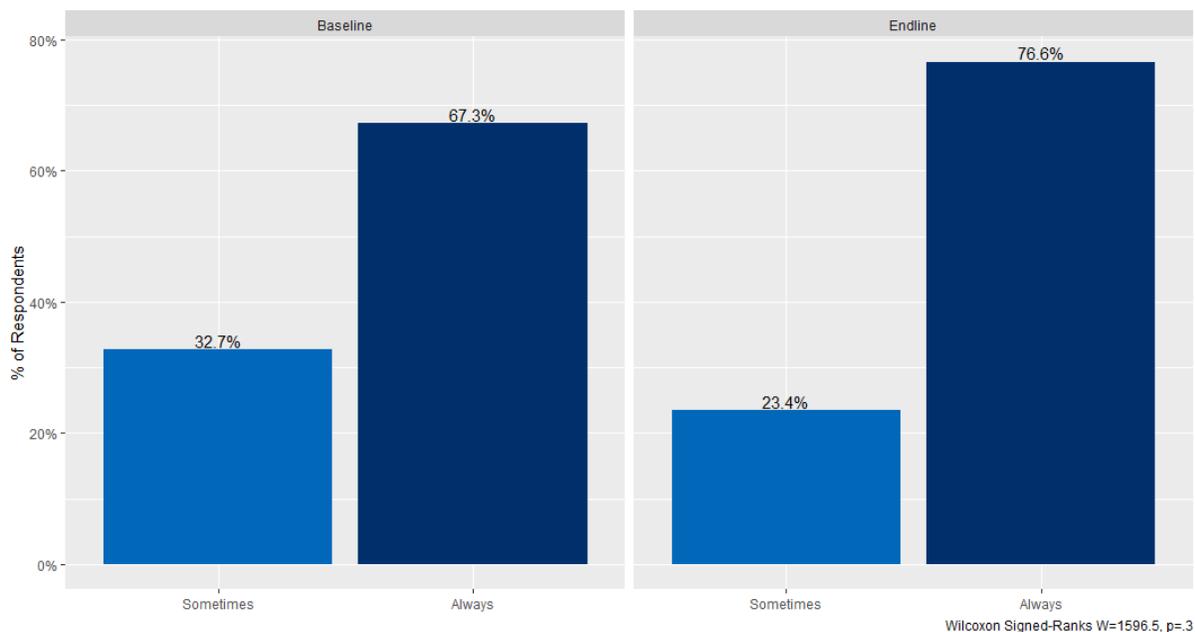


Figure 16. Ability to get more materials when needed

Finding 4: Reduced financial burden of purchasing menstrual products and reduced reliance on unsafe menstrual materials

In baseline FGDs, women employees shared that menstrual products were expensive and financially burdensome to purchase, especially given their low wages. Many women reported in FGDs that they prioritized other necessary household expenses over menstrual products. When they did purchase menstrual products, women reported only budgeting enough for themselves or their daughters. As a result, they found it difficult to lend extra disposable pads to colleagues who needed them.

Women employees reported that having access to free menstrual products in the workplace not only reduced the financial burden of purchasing these products, but it also removed a profound barrier for managing menstruation at work. During endline FGDs, women stated that they no longer had to worry about the cost of buying pads and/or having to come up with vague excuses to ask family members for money or permission to purchase menstrual products. Participants in endline FGDs also reported that they appreciated the provision of products at work because it saved them the time and inconvenience of going to shops to buy them.

Product support is really very helpful. Now we didn't have to ask for 50–100 rupees from family members, saying that we need to buy medicine for headache. We saved around 500–600 rupees during the intervention period, and we were able to save money now. – Woman employee, FGD, Endline

Finding 5: Minimal reduction in stress relating to access to menstrual products at work

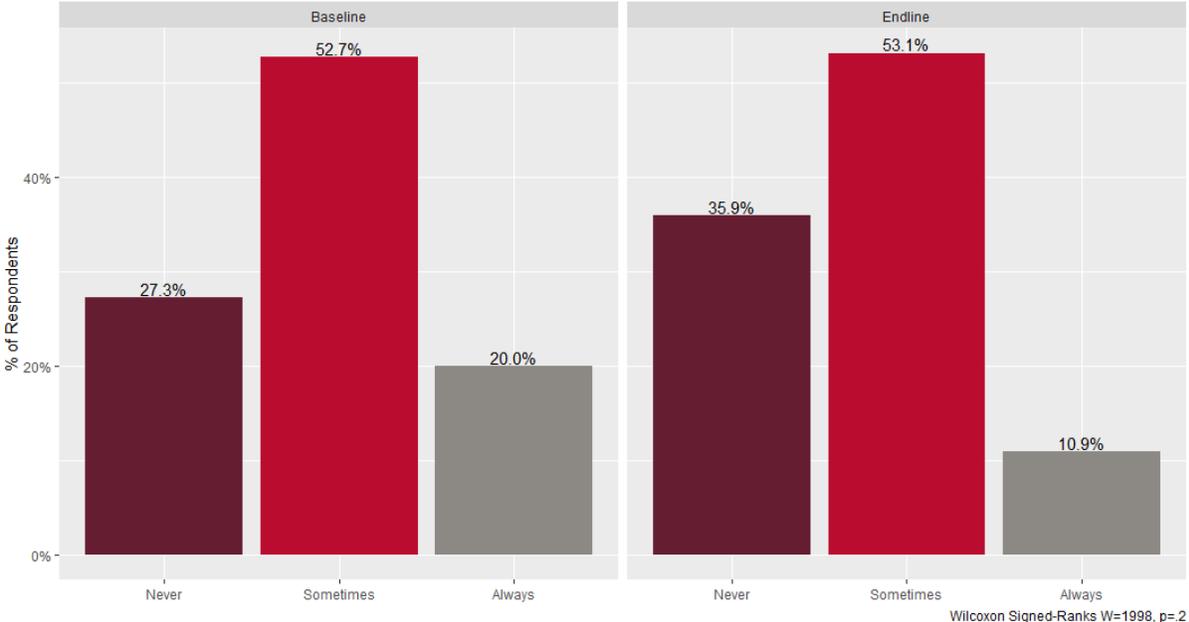
Even at endline, respondents continued to worry that they would not have access to menstrual products if they ran out at work (Figure 17). Data from the women’s questionnaire show that over 70 percent of

respondents at baseline and 60 percent at endline worried sometimes or always that they would not have access to materials if they ran out, suggesting that women at Company B continued to experience anxiety and stress relating to menstrual materials. At Company A, these differences were more pronounced; fewer respondents worried they would not have access to materials if they ran out at endline (26 percent) compared to baseline (60 percent). During endline FGDs, the women who reported less anxiety associated with menstruation linked it to the provision of free products at work. Those who reported continued stress at endline were those who worried about inadequate product provision at work after the end of the intervention, as learned from endline FGDs. Another source of concern for women employees was having to ask men supervisors for pads, despite intervention efforts to normalize and destigmatize menstruation.

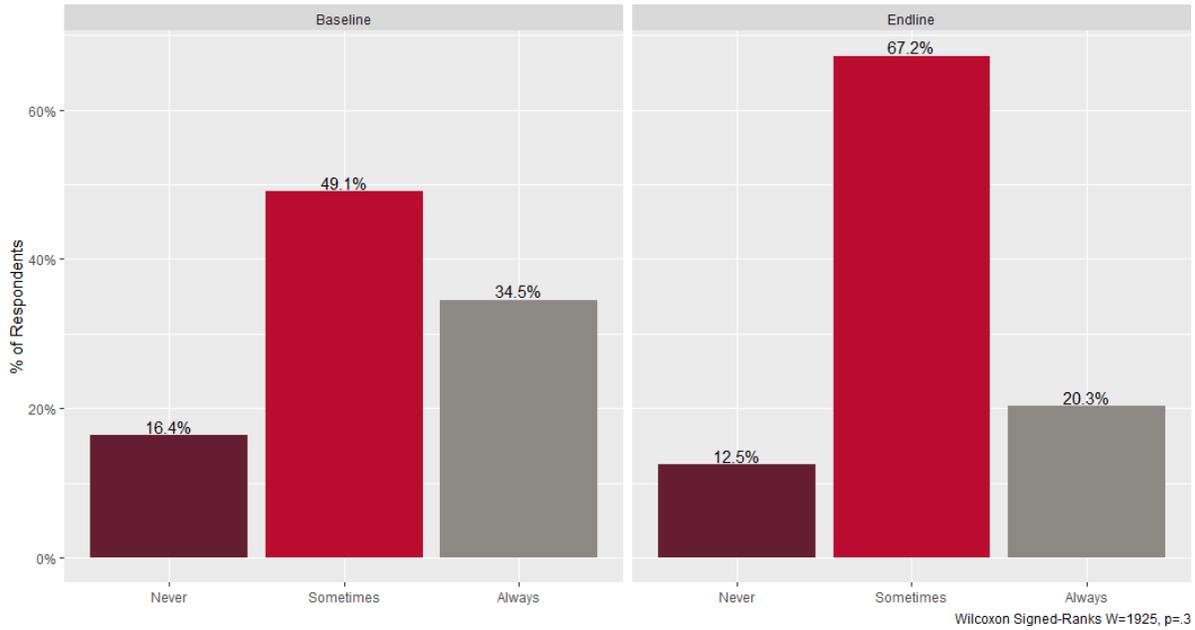
Additionally, having access to free menstrual products contributed to a reduction in women employees' absenteeism, as they no longer needed to leave work to find a spare menstrual product. They cited during baseline that needing to ask for menstruation-related leave was a stressor; therefore, the reduced need for menstruation-related leave at endline predictably contributed to lower stress levels, particularly associated with having to ask for leave.

Respondents also continued to worry about leakage or about menstrual materials moving out of place. Many women spend several hours at the looms, and despite being educated about the need to change products, production cycles and demands often mean that the women themselves don't want to leave the looms. As such, they sometimes worry about leakage if they haven't changed their products in a timely manner. Even at endline, women worried their clothes might be noticeably stained with menstrual blood. However, they were very satisfied with the comfort and cleanliness of their menstrual materials.

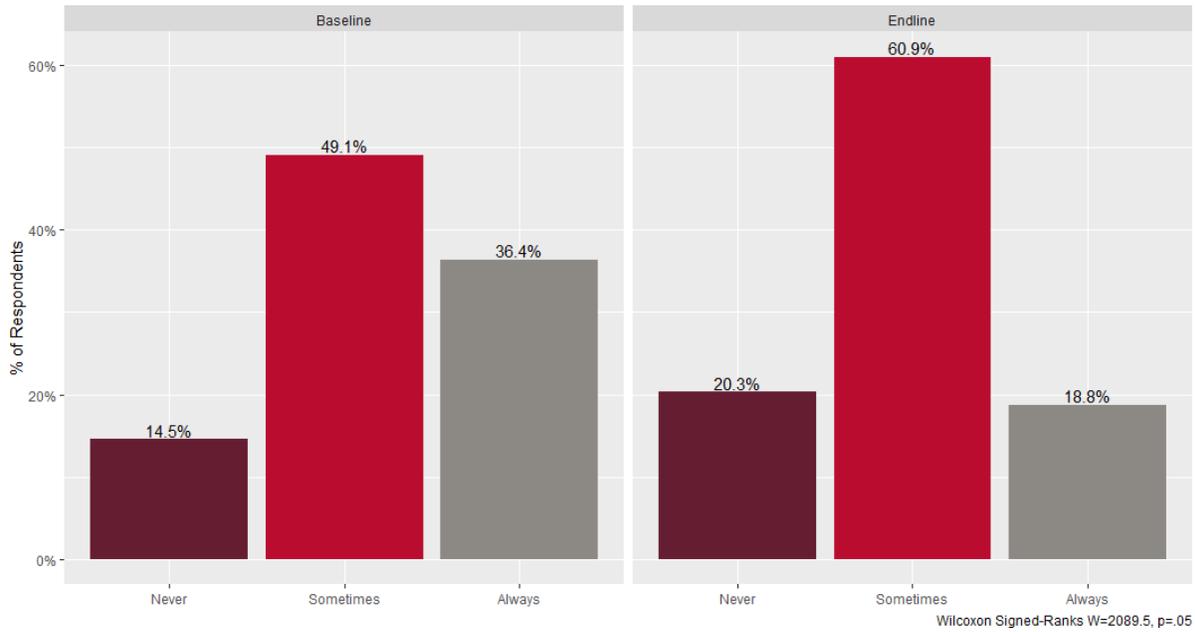
a) Q: How often did you worry about how you would get more menstrual materials at work if you ran out?



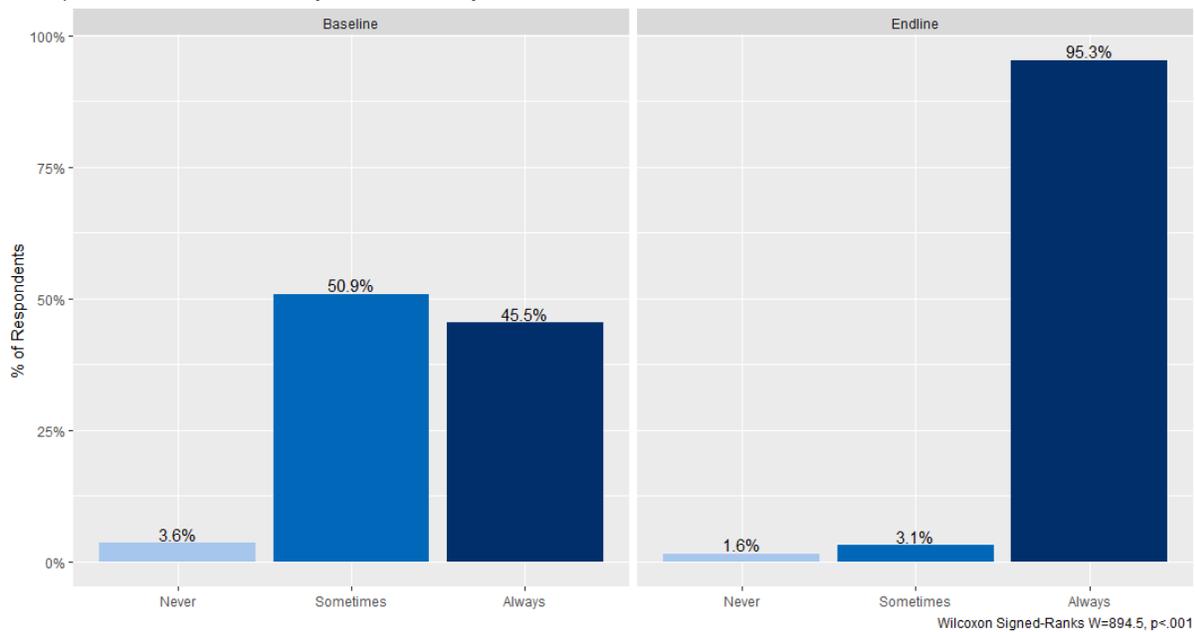
b) Q: How often did you worry that your menstrual materials would allow blood to pass through to your outer garments?



c) Q: How often did you worry that your menstrual materials would move from place while you were wearing them?



d) Q: How often did you feel that your menstrual materials were comfortable?



e) Q: How often were you satisfied with the cleanliness of your menstrual materials?

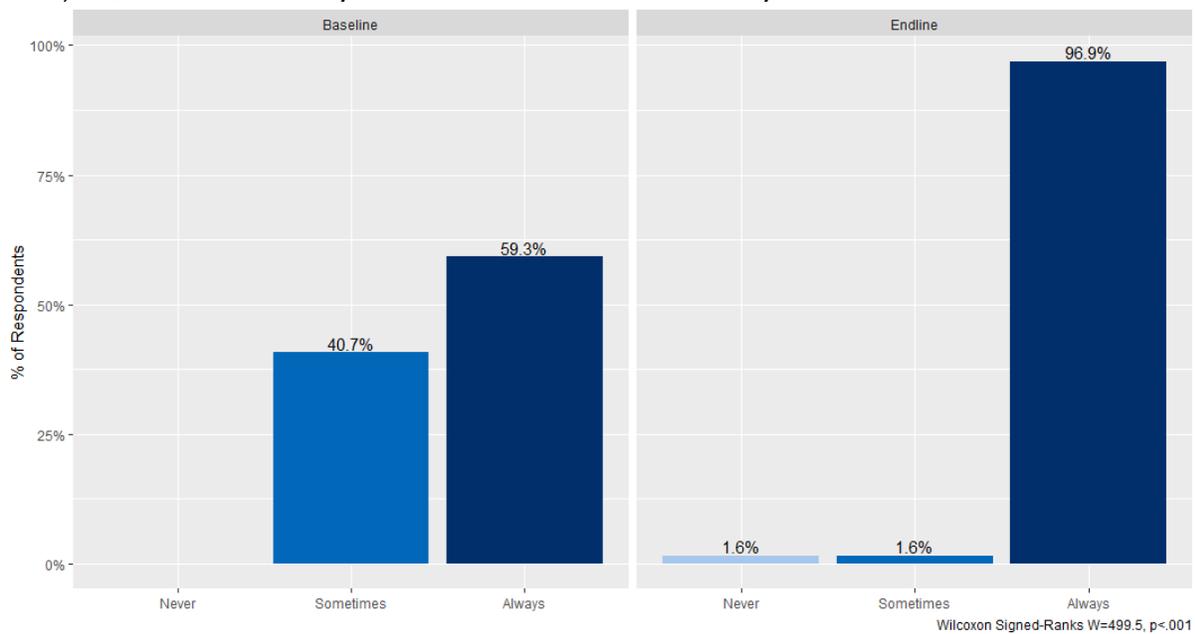


Figure 17. Changes between baseline and endline in women’s menstrual product-related anxiety

3.3.3 ACCESS TO SAFE AND CLEAN FACILITIES THAT ARE EQUIPPED WITH SOAP AND WATER TO BATHE ONESELF AND CLEAN OR DISPOSE OF MATERIALS

Finding 6: Improved access to cleaner toilets at endline

At baseline, the infrastructure assessment and FGDs with women and men employees revealed that the quality of toilet facilities at Company B was inadequate. Toilet facilities did not have soap, water, lockable doors, or proper lighting. Men and women had to share toilets and there was no place to

dispose of their used menstrual products. Women reported feeling uncomfortable with the lack of female-friendly infrastructure and the absence of crucial sanitation resources, as they could not clean themselves adequately after changing menstrual products in toilets.

Company A installed new toilet infrastructure and made their facilities more MHM friendly as a result of recommendations made by the team prior to the startup of the project; however, Company B's management installed new toilets after the endline as a direct result of project engagement. By November 2021, the company had made infrastructure improvements which included three separate women's only toilets with lockable doors, running water and hooks on the back of doors. All women's toilet facilities were equipped with a non-menstrual waste bin. Women requested that the toilets not be outfitted with lighting as they were worried about lack of privacy if added lighting was installed. Both women and men stated that toilet facilities were cleaner at endline than at baseline. They attributed the improved sanitary conditions, at least in part, to employees learning how to properly use and maintain the existing infrastructure.

As a result of the COVID-19 pandemic, the owners and management of the company also installed a functioning handwashing station including soap, which may have contributed to women employees' improved hand hygiene.

Before the intervention, the women at [Company B] had to wait for the nighttime to use the toilets, as they did not have a proper lock system, not enough soap near the tap (they have to go to their quarters to use soap and then come to wash their hands in the tap outside the toilet area). But now, they have 24 hours running water facility, soap is available near the toilet area, and also the toilet is clean comparatively and whitewashed too. Two separate urinals for men and women were constructed. – Woman employee, FGD, Endline

3.3.4 SUPPORTIVE ENVIRONMENT IN THE WORKPLACE THAT ALLOWS WOMEN TO MANAGE THEIR MENSTRUATION WITHOUT FEAR OF STIGMA OR EMBARRASSMENT

Finding 7: Greater social support for menstruation

In the women's questionnaire implemented at baseline and endline, participants were asked five questions about social support received from colleagues and supervisors at work. At baseline, the mean social support score was 12.6, compared to 17.3 at endline, out of 22. In endline FGDs, women reported asking for breaks as needed while menstruating, asking for extra pads from colleagues, and asking men at the loom to pause their work to allow their female colleagues to change menstrual products or go to the toilet. In response to a specific question regarding support from supervisors, more women reported feeling comfortable to a large extent at endline (45 percent) relative to baseline (26 percent) to tell supervisors that they needed to leave work for menstruation-related reasons ($W=1202, p=0.001$) (Figure 18).

Q: Do you feel comfortable telling your supervisors that you need to leave work for menstruation-related reasons?

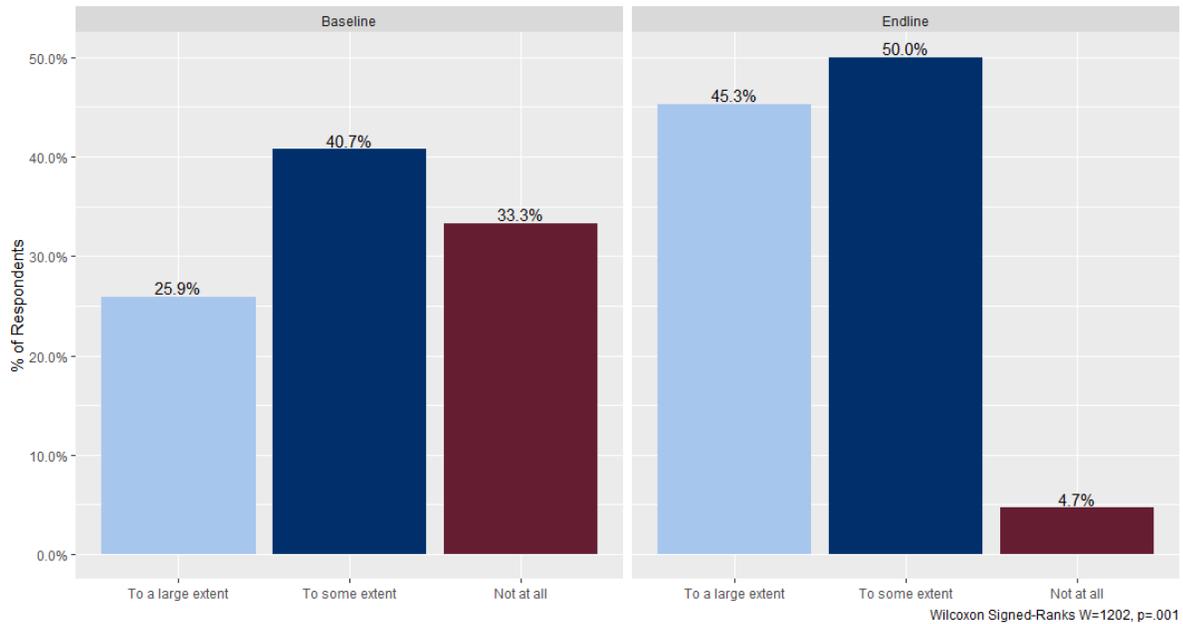


Figure 18. Changes between baseline and endline for women’s comfort with requesting leave

Finding 8. Breaking the culture of silence around MHM and normalizing menstruation as a biological process

At baseline there was a strong culture of silence around menstruation. During baseline FGDs women reported believing that God made women bleed to cleanse them of the sins from their previous life. They reported feeling as though their periods were their own personal problems, and that sharing their experiences with others at work was inappropriate. Furthermore, women reported being treated as impure when they were menstruating, so they preferred to stay separate from others while they were bleeding; going to the temple, cooking, and sharing the same bed with the men of the family was not allowed during this time.

After the intervention, women at both companies still reported feeling reluctant to go to temple during menstruation, but they were more likely to take daily baths and cook the family than they were at baseline. Furthermore, during endline FGDs, women at both Company A and B reported knowing that menstruation is a natural process that indicates that a girl/woman is physically ready to conceive.

The previously described culture of silence meant that women were unable to share MHM best practices, common challenges, and solutions to these challenges. During baseline, several women mentioned they had never talked about menstruation before the research team’s MHM discussion with them. Others reported that they only discussed it once with their mother, aunt, or older female sibling during menarche. The women stated that after attending the education sessions, they were more comfortable to discuss menstruation and menstruation-related challenges and solutions among each other.

Figure 19 presents data from the women’s questionnaire, showing increased confidence from baseline to endline in discussing menstrual needs with a colleague. This increase was more pronounced at Company

A. It is important to note, however, that although women were open to such discussions with one another, they were still not comfortable at endline to speak with men colleagues about menstruation.

Q: If you need advice about how to manage your period, how confident do you feel asking a colleague or another staff member?

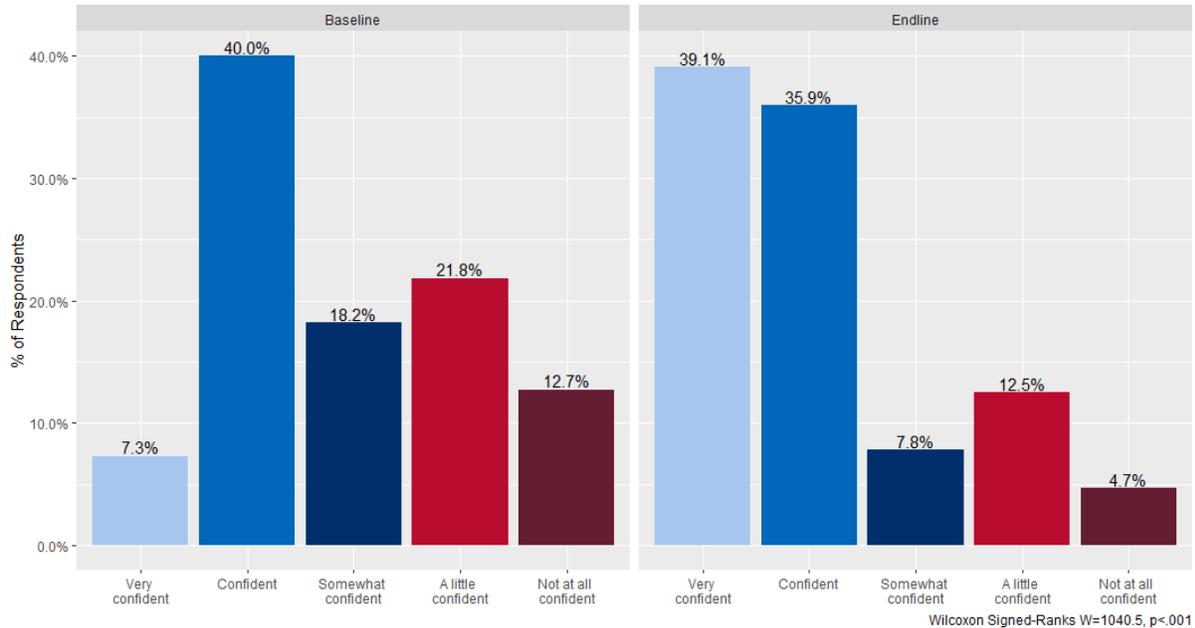


Figure 19. Changes in confidence in asking a colleague/staff member about how to manage one's period

This culture of silence also led women to refrain from talking about complications with menstruation, which sometimes led to delays in seeking medical care and late diagnosis of medical issues relating to sexual and reproductive health. At Company B, only women who had given birth had previously sought medical advice regarding menstrual health. This intervention was the first time they had spoken with a medical doctor regarding menstruation; as a result, they reported feeling increased confidence in speaking with a doctor in the future about possible MHM issues.

We are learning this now at the time when we are in the situation of menopause. However, I think I am teaching more to my daughters and daughter-in-law on the right way of maintaining hygiene during menstruation. [I am] happy that my husband is also encouraging me to speak up on this issue with the relatives. – Woman employee, FGD, Endline

During baseline, men also firmly believed that menstruation was a woman's issue and that they must handle period related issues alone. Some men expressed that they wanted to learn about MHM to be supportive of women colleagues and family members. At endline, men referred to menstruation as a natural process and not a curse from God.

Finding 9: Reduced menstruation-related stigma linked to a more supportive environment

As noted under Finding I, the educational sessions provided during the intervention, as well as the BCC materials, sought to normalize menstruation as a biological process and, as a result, seemed to break down many of the deeply held taboos and stigmas related to menstruation. In the baseline FGDs, respondents shared that both women and men would gossip about menstruation and their menstruating

colleagues, creating a less than supportive work environment; however, after the intervention, women reported that if they saw a colleague in pain, they would support her and ask after her health and wellbeing. During the endline FGDs, a few women stated that after the intervention they faced less discrimination from other women and men colleagues and supervisors.

Menstruation is a natural physical process. Women can and should be allowed to do everything during menstruation and there should not be any discrimination. – Man employee, FGD, Endline

Finding 10: Increased understanding of menstruation-related needs by supervisors and management

At baseline, supervisors' and managers' responses in KIIs indicated limited understanding of employees' menstruation-related needs, concerns, and issues. The supervisors and managers at Company B are unmarried men and therefore had little to no knowledge about MHM and the issues faced by women employees, including their need to use the restroom and change their products frequently while at work. Most men at the factories stated that they find out about menstruation after marriage; unmarried men had little to no knowledge around menstruation. The culture of silence around menstruation contributed to this lack of knowledge. However, the owner of the company was keenly aware of MHM related issues and had himself tried to discuss proper menstrual hygiene with the relatively young workforce of women. He felt that it is necessary for men supervisors and the manager to understand MHM. During the baseline KII, he stated that despite his attempts to engage the young women workforce, women employees were reluctant to discuss MHM with him.

The team engaged the owners, managers, and supervisors in education and BCC sessions and discussions so as to help them understand MHM and how it affects women employees. At endline, women noted that supervisors and men colleagues became respectful of their MHM needs, resulting from the intervention. The factory manager and co-owners (all men) were active participants in the intervention, personally ensuring that all employees participated in the education and BCC sessions throughout the intervention.

One noticeable impact of the intervention was greater willingness of women to tell their supervisors that they need leave for menstruation-related reasons (Figure 20). The proportion of women who felt comfortable telling their supervisors to a large extent or to some extent increased from baseline (30 percent) to endline with nearly half of the women (45 percent) reporting that they felt comfortable at endline (Wilcoxon Signed Ranks $W=1202$, $p=0.001$).

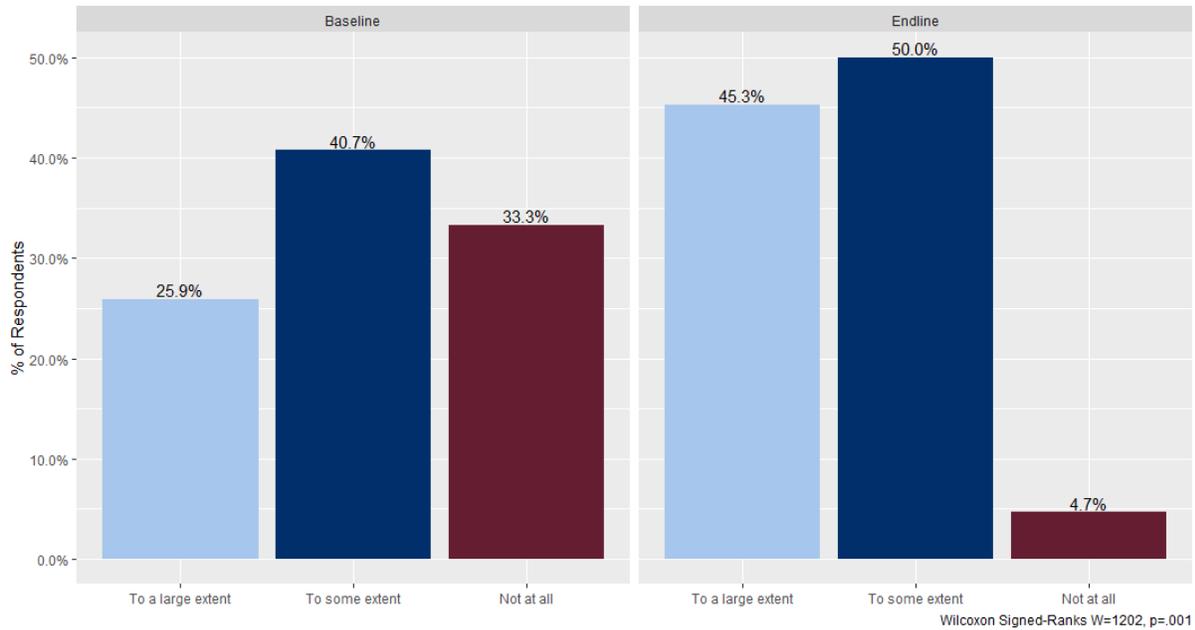


Figure 20. Changes between baseline and endline in women’s comfort with telling their supervisors that they need to leave work for menstruation-related reasons

Finding 11: Spillover effects of the intervention to the larger community

In endline FGDs, women noted that carrying the *Maryadit Karyasthal* menstrual wellness bag facilitated conversations with women outside of the workplace, including with their extended family members, neighbors, and friends. Many of the women who participated in the FGDs grew up in remote villages and came to Kathmandu to work at Miha Custom Rugs. After the intervention, women reported serving as liaisons to their communities, sharing knowledge acquired through the intervention with their families and peers in their villages. Additionally, women stated that the intervention helped to boost the confidence of women and girls both at the factory and in their home communities. They not only discuss MHM issues among each other, but they are now very loud and clear when dealing with others such as shopkeepers.

Now for us, talking about MHM is not an old tradition. We are able to talk to each other and peer support is seen among the group. We also know that engaging men is very important in the whole process. – Woman employee, FGD, Endline

3.3.5 IMPROVED MHM PRACTICES

Finding 12: Greater use of safe and hygienic menstrual materials and increased likelihood of changing menstrual materials

During baseline FGDs, many women shared that they used old and unhygienic cloth and wore it for long periods of time. Others reported that they use disposable pads, using a single pad for as long as an entire day. Many women reported in FGDs that they did not have safe and hygienic menstrual products on hand if they started menstruating at work, leaving them no choice but to use cheaper, low-quality disposable pads or unclean *kapada*, and wore the disposable pad for as long as 24 hours if required. Women also shared that they did not have the time to change menstrual products while at work; they even restricted their water intake so as to avoid using the toilet more than once per day. Lack of

knowledge about the frequency of changing pads, expense associated with safe, absorbent, and hygienic menstrual products such as disposable pads, challenges in buying menstrual products, lack of time to change products frequently during working hours, reluctance to share the need to go to the toilet to change menstrual products with men supervisors and colleagues, as well as challenges with disposal contributed to them overwearing pads.

Education and BCC efforts coupled with free provision of menstrual materials at work led to increases in the number of times women reported changing menstrual materials (Figure 21). More women also reported being able to change menstrual materials when desired. Figure 22 shows that at baseline 13 percent of women reported never being able to change materials when they wanted; at endline, that percentage dropped to 2 percent. This improvement was more pronounced at Company A, where 100 percent of respondents were always able to change their menstrual materials when they wanted to at endline compared to 55 percent of respondents who reported so at endline at Company B.

Q: How many times did you change your menstrual products on the heaviest day of your period?

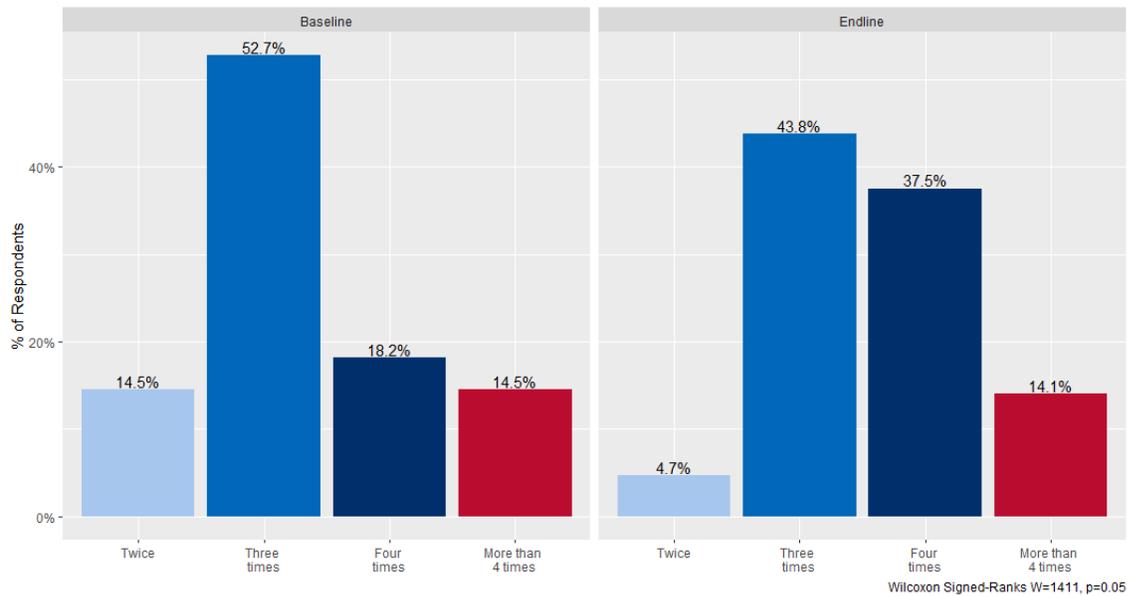


Figure 21. Difference in frequency of changing menstrual materials from baseline to endline

Q: How often were you able to change your menstrual materials when you wanted to?

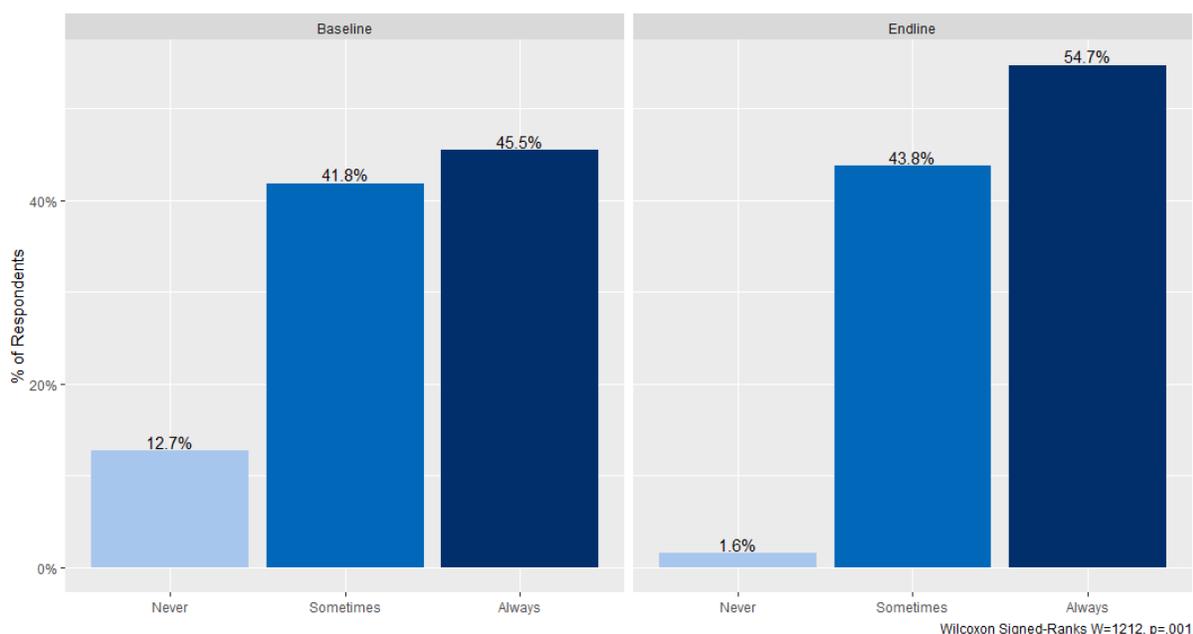


Figure 22. Difference in the ability of women to change menstrual materials when desired

Finding 13: Fewer health complications and fewer associations of menstruation and odor

During baseline FGDs some women reported experiencing menstrual health complications, like vaginal infections. They linked these menstrual health complications to overwearing menstrual materials and using unsafe or unhygienic materials such as dirty cloths. After interacting with Dr. Anjana as part of the intervention, women also reported being more comfortable with going to a doctor for menstrual needs.

During baseline FGDs, some women and men stated that menstruating women smell bad because they wore their menstrual materials for too long. However, during the endline FGDs, both women and men noted that menstruating women no longer smell because they started to change their materials more frequently because they had sufficient materials to do so.

There is no more foul smell nowadays [most of the women laughed after saying this]. – Woman employee, FGD, Endline

When probed, women reported that their colleagues associated the smell of menstruation with impurity and uncleanness. The smell was not necessarily offensive, but instead carried a stigma with it. Thus, for participants to share that menstruating women do not smell bad suggests a possible shift in beliefs regarding menstruation as a normal biological process rather than something unclean.

Finding 14: More hygienic washing and drying practices for reusable materials

During baseline FGDs, women reported hoarding used *kapada* for 8–10 hours and washing it under the cover of darkness. By the end of the intervention, women reported that they washed *kapada* immediately after use with soap and water, as advised by the education and BCC materials. They also reported drying them in the sun rather than in a dark room or under other clothing. For the women that did report using reusable pads at work, the *Maryadit Karyasthal* bag also allowed them to store used

reusable pads in the waterproof section and wash the products discreetly after work. The women also used the Maryadit Karyasthal bag to carry their disposable pads and extra underwear.

Now we do not feel any shame or fear to dry our cloths in the sun, we know that the sunlight helps to kill all the germs from our reusable cloths. After drying, they keep all the reusable cloths in the plastic bags and keep it safe for [the] next 28 days. – Woman employee, FGD, Endline

Data from the women’s questionnaire found that 92 percent of participants at endline—compared to 75 percent at baseline—reported that menstrual cloths should be washed with detergent and hung out in the sun to dry rather than hiding them from other people in a dark room, under other clothes.

Finding 15: Proper disposal of disposable products

The intervention facilitated a contract at Company B for improved waste disposal with private vendor Mitra Samaj. This included education, video trainings of BCC sessions focused on appropriate waste disposal, and installation of Mitini. Mitini is a menstrual waste bin, autoclaving, and disposal system developed by Mitra Samaj. FGD participants reported changes in disposal behaviors at endline:

The women are not educated so they throw the used pads in the passages and anywhere they want. – Man employee, FGD, Endline

During the monsoons we used to have to deal with menstrual blood dripping on us from menstrual materials hidden in the ceiling of the toilets. But this was not a problem during this monsoon. – Women and men employees, FGD, Endline

As part of the intervention, the management at Company B provided disposal bins and services in the toilets. Interestingly, data from the women’s questionnaire finds that most or nearly all women reported disposing of menstrual materials away from work in a community rubbish bin (78 percent at baseline; 97 percent at endline). Prior to the intervention, the management and supervisors complained that toilets were constantly clogged with menstrual waste, and plumbers were regularly called in to unclog the toilets. According to senior management at Company B, educating women how to properly dispose of their menstrual waste led to not having to hire plumbers to unclog toilets and thus to reduced maintenance costs.

Finding 16: Better pain management

Prior to the intervention, women managed pain by taking pain medication only, as shared during baseline FGDs. During the endline FGD, the women stated that they have learned to manage pain by drinking hot water, using a hot water bottle, and taking rest when necessary.

3.3.6 IMPACTS ON WOMEN EMPLOYEES AND EMPLOYERS

Finding 17: Improved job satisfaction among menstruating employees

During endline FGDs, women reported feeling a greater sense of dignity as employees and feeling buoyed by the sentiment that the owner of Company B cares about their well-being. These feelings likely led to slightly greater job satisfaction as revealed by change in responses to the women’s questionnaire at baseline and endline. At endline, a greater proportion of women reported improved job satisfaction (40 percent) relative to baseline (14 percent).

Q: Compared to this time last year, would you say your satisfaction with your job has improved, stayed more or less the same, or worsened, overall?

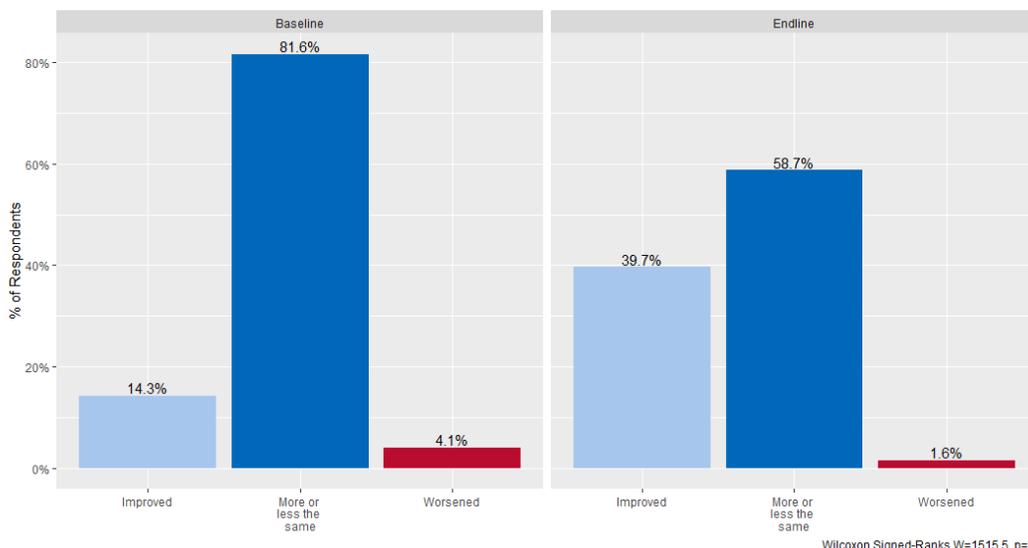


Figure 23. Changes between baseline and endline in whether women, compared to this time last year, would say their satisfaction with their job improved, stayed more or less the same, or worsened, overall

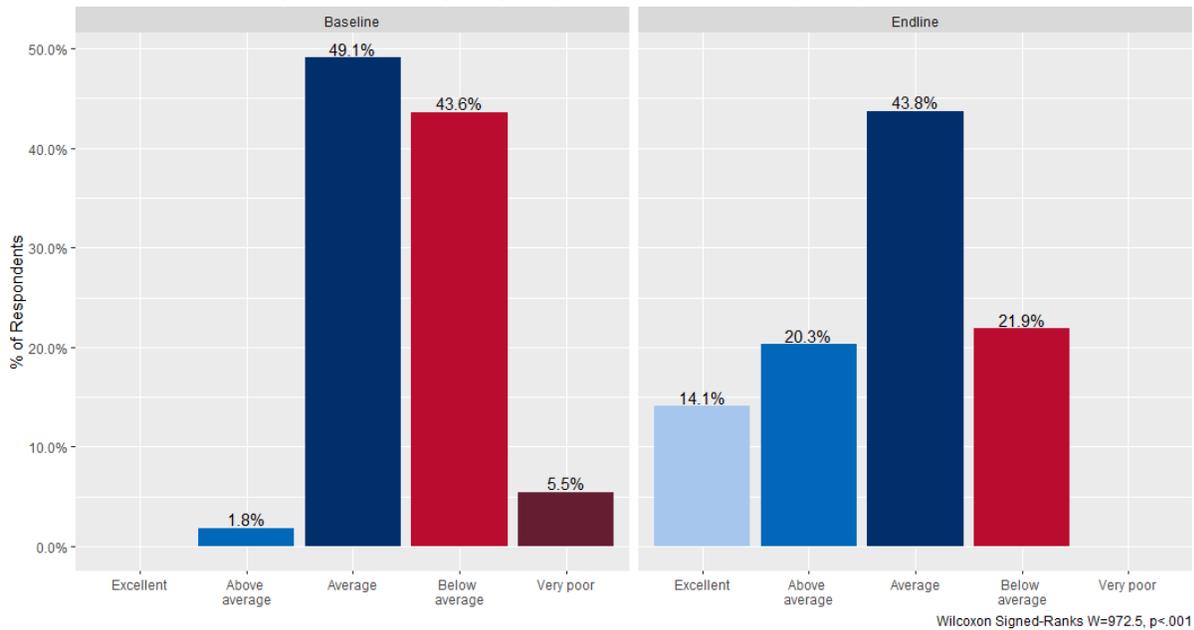
Finding 18: Improved productivity and work performance among menstruating employees

During endline FGDs, women reported feeling grateful for the free provision of menstrual products because it saved them time formerly required to go buy products. They said that the time savings allowed them to be more productive at work.

We are feeling a sense of peace of mind as we didn't have to think of buying pads. What if I bleed now, what to say to colleagues, what to respond to supervisor and owner if I am not coming to work on time, or want to go and rest. My productivity has increased nowadays. – Srijana, Female MHM Focal Person, KII, Endline

Additionally, women also reported improved performance at work. Data gathered as part of the women’s questionnaire showed that a greater proportion of women rated the quality of their work as excellent (14 percent) and above average at endline (20 percent) relative to baseline (0 percent excellent; 2 percent above average) (Figure 24a). There were also similar improvements from baseline to endline in women reporting their confidence in meeting personal production targets on time while menstruating (Figure 24b).

a) Q: How would you rate the quality of your work while on your period?



b) Q: How confident do you feel that you can meet your personal production targets on time while on your period at work?

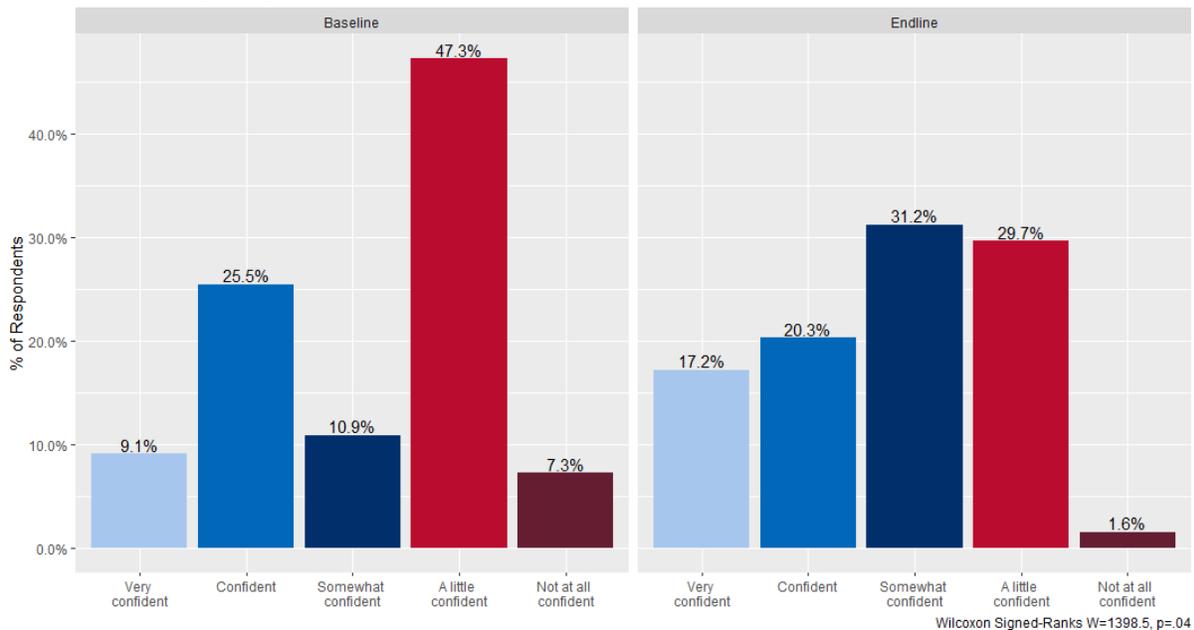


Figure 24. Changes between baseline and endline in women’s reported self-efficacy

Finding 19: Reduced absenteeism and presenteeism among menstruating employees

At endline, 87.5 percent of women missed no days of work compared to 72.7 percent at baseline. Table 7 shows that more women missed a part of their workday due to menstruation-related reasons at endline (40 percent) compared to baseline (30 percent). At Company A, however, this statistic decreased, with 9 percent of women reporting that they missed a part of their workday at endline compared to 32 percent at baseline (Table 5).

Table 7. Changes between baseline and endline in women employees' absenteeism

	Baseline	Endline	T statistic	P value
Mean days missed by women employees due to menstruation-related reasons, per woman	0.4 days	0.1 days	2.4	0.02
Mean hours missed by women employees due to menstruation-related reasons, per woman	1 hour	1.4 hours	-0.8	0.4
Percentage of women who missed part of a workday due to menstruation-related reasons	30%	40%	-1.2	0.2

The team used the Stanford Presenteeism Scale (SPS-6) to assess changes in presenteeism between baseline and endline. Presenteeism scores are calculated by summing the responses to six 5-point Likert scale questions, each scored from 0–4, representing the level of presenteeism. The total possible score ranges from 0–24, where 0 indicates the least presenteeism. At baseline, the mean score was 11.8, ranging from 0–23. At endline, the mean score was 10.0, ranging from 0–18. Despite this modest decrease, there was no statistically significant difference between baseline and endline ($t=-1.69$, $p=0.092$).

4.0 FINDINGS FROM KENYA

4.1 INTRODUCTION

The research team performed baseline and endline assessments before and after implementing the *MHM in the Workplace* interventions in both Kenyan workplaces.

Kenya Company A is a family-owned, cloth manufacturing company located in Thika, Kenya, approximately one hour northeast of Nairobi. The company's workforce is dominated by men, employing 550 men and 51 women at the time of baseline data collection. The number of employed women increased slightly over the course of the intervention, such that women employees totaled 73 at endline. Kenya Company B is a garment manufacturing company located in Kenya's export processing zone in Athi River, approximately one hour southeast of Nairobi. This company is a woman-dominated workforce, employing 259 women and 87 men at baseline and 281 women and 113 men at endline. Partner company profiles can be seen in Table 8 below.

Table 8. Company profiles for Kenya Company A and Kenya Company B

Feature	Company A	Company B
No. of women employees	51 at baseline (December 2020) 73 (plus 12 women interns) at endline (October 2021)	259 at baseline (January 2021) 281 at endline (June 2021)
No. of managers	17	5
No. of supervisors	51	17
Industry	Textile manufacturing	Garment manufacturing
Age range of women employees	18–50+ with most being 20–30	19–35+ with most being 28–35
Education level	Secondary level and higher	Some primary, some secondary, but not higher than secondary
Literacy and language preference	<ul style="list-style-type: none"> • Medium to high literacy level • Can consume information in both English and Kiswahili • Can write 	<ul style="list-style-type: none"> • Not very literate, and some are illiterate • Simple Kiswahili or sheng preferred for any written or spoken content • Some cannot write
Workplace dynamics	<ul style="list-style-type: none"> • Workforce mostly consists of men with some tensions between men and women employees • While men were curious about menstruation, women were silent 	<ul style="list-style-type: none"> • Workforce mostly consists of women with general curiosity about menstruation • Lack of transparency and communication between management and employees
Existing initiatives at baseline	<ul style="list-style-type: none"> • Nurse present on site to hand out painkillers and provide first aid • Union representatives advocated for employees' needs, but no mention of MHM-related advocacy at baseline • Comments box not in operation due to COVID-19, but pre-COVID-19, comments were reviewed by 	<ul style="list-style-type: none"> • First aid provider supposed to provide pads for emergencies (via human resources [HR]) and painkillers; however: <ul style="list-style-type: none"> ○ Pads were not clearly present onsite or provided by either human resources or factory manager

Feature	Company A	Company B
	<p>managing director; this person was willing to re-instate this system again but did not during the intervention timeline</p> <ul style="list-style-type: none"> • Notice board was present for company-wide updates 	<ul style="list-style-type: none"> ○ First aid provider sometimes gave antacids instead of painkillers, due to limited training ○ First aid provider was not always present ○ First aid provider frequently did not have access to pain killers • Factory manager had two pad packs/month for emergencies <ul style="list-style-type: none"> ○ This was self-reported by the manager and not confirmed by employees so it is unconfirmed • HR manager had emergency pads available and advocated for menstruators <ul style="list-style-type: none"> ○ This was also unconfirmed by employees and self-reported by the manager • Factory manager conducted lunch sessions about harassment, empowerment, etc. <ul style="list-style-type: none"> ○ While onsite for the intervention and in conversation with MHM champions, the research team did not observe these sessions or confirm • Three older women served as mentors and confidantes to younger women and they reported to the factory manager if someone needed a pad because their period started unexpectedly • HR used bulk mobile messaging for company-related notices • Comments box was present with varying levels of use/application • Worker relations (management appointed) advocated for employees' needs, but not MHM-related needs • Notice board for company-wide updates was present, and empty walls were used for informal/formal notices (though many women have low literacy)

Baseline data collection took place December 16–28, 2020 at Company A and January 13–25, 2021 at Company B, after which various intervention activities were implemented. Endline data collection took place October 4–12, 2021 at Company A and June 21–25, 2021 at Company B.

The research team was comprised of four Kenyan women research consultants and one Kenyan man research consultant, with an American woman researcher (i.e., Iris Group Senior Associate) providing technical oversight and overall management of onsite activities. Table 9 below presents the data collected at baseline and endline at both partner company workplaces.

Table 9. Data collected for analysis at baseline and endline at Kenya Company A and Kenya Company B

Data Collection Method	Tool	Number at Baseline – Company A	Number at Endline – Company A	Number at Baseline – Company B	Number at Endline – Company B
Women Employees					
FGD	Women’s baseline/ endline FGD guide	4 FGDs of 3–5 per group (17 total)	3 FGDs of 4–7 per group (16 total)	4 FGDs of 5 per group (20 total)	2 FGDs of 6 per group (12 total)
Questionnaire	Women’s baseline/ endline questionnaire	46	38	150	81
Men Employees					
FGD	Men’s baseline/ endline FGD guide	3 FGDs of 4–5 per group (14 total)	2 FGDs of 4 per group (8 total)	3 FGDs of 3–5 per group (12 total)	2 FGDs of 4–6 per group (10 total)
Questionnaire	Men’s baseline/ endline questionnaire	50	51	50	39
Supervisors					
FGD/KII	Supervisors’ baseline/ endline FGD/KII guide	1 FGD of 4 (women) 1 FGD of 5 (men)	1 KII (woman) 1 FGD of 4 (men)	1 FGD of 3 (women) 1 KII (man)	1 FGD of 6 (women), 1 FGD of 5 (men)
Union Representatives (Company A) / Worker Relations (Company B)					
FGD	Union representatives / worker relations baseline/ endline FGD guide	1 FGD of 4 (men)	2 FGDs of 5 (10 total, men)	1 FGD of 2 (women)	1 FGD of 2 (women)
Senior Management and Leadership					
KII	Management and Leadership baseline/ endline FGD guide	4 (men)	2 (women) 2 (men)	2 (women) 3 (men)	1 (woman) 3 (men)
On-site Nurse (Company A) / First aid provider (Company B)					
KII	On-site nurse / first aid provider KII guide	1 (woman)	1 (woman)	1 (woman)	1 (woman)
Mentors					
FGD	Mentor FGD guide (baseline only)	0	0	1 FGD of 4 (women)	0 ⁴

⁴ Mentors were unrecognized at endline; additionally, the intervention did not carry out technical assistance to the factory manager on mentorship, as planned.

Data Collection Method	Tool	Number at Baseline – Company A	Number at Endline – Company A	Number at Baseline – Company B	Number at Endline – Company B
MHM Champions					
FGD/KII	MHM Champion FGD/KII guide (endline only)	0	1 KII (woman)	0	1 FGD of 4 (women)
Workplace Infrastructure					
Observation	Infrastructure Assessment	1	1	1	1

The *MHM in the Workplace* intervention launch at each workplace (January 14, 2021 at Company A and January 26–30, 2021 at Company B) took place after baseline data collection. Endline data were intended to be collected nine months later at both workplaces during a closeout ceremony. This timeline proceeded as planned at Company A; data analyzed and presented in this section for Company A cover the full nine-month intervention timeline. Though the intervention at Company B continued for nine months, endline data collection took place five months after intervention launch, due to high numbers of employee attrition at that workplace. Therefore, the data analyzed and presented from Company B only highlights five months of intervention findings.

The sections below present findings from the mixed-methods comparative baseline/endline data analyses at Company A and Company B, respectively. Findings are organized by research question sub-category of adequate MHM; additional content is organized by predominant themes that emerged in the analysis of each partner company data.

4.2 WORKPLACE I: KENYA COMPANY A

Below are findings from the data collected at the textile manufacturing company, Company A. These findings reflect trends after nine months of intervention implementation.

4.2.1 AWARENESS, INFORMATION, AND SELF-CONFIDENCE REGARDING MENSTRUATION

Finding 1: Improved knowledge of the physiology of menstruation

The responses to the women’s questionnaire showed that baseline levels of knowledge regarding the physiology of menstruation were high at baseline, comparing the answers with qualitative endline data showed an increase in knowledge over time. Men and women employees linked improved knowledge among various respondent groups to sensitization and BCC intervention components.

In FGDs at baseline, many women employees reported learning about menstruation in school and perceived menstrual education to be something that was taught to adolescent, school-going girls—not a topic of education needed for adults. The nurse also mentioned in her baseline KII that women in her workplace should understand menstruation because they are mature adults. Men employees had more limited knowledge about menstruation at baseline compared to their women counterparts. Men and women employees held several stigma-driven misconceptions about menstruation (see Finding 9: Reduced menstrual stigma). Some employees viewed menstruation as an abnormal, non-biological process. Additionally, both men and women were curious to learn more about menstruation, MHM, and

menstrual health. Men, in particular, wanted to better understand the needs of their daughters, sexual partners/spouses, and women colleagues.

At endline, more employees (including men, women, union representatives, and supervisors) acknowledged menstruation as a normal biological process as compared to baseline. In endline FGDs, women and men employees reported more advanced knowledge about the physiology of and physical impacts of menstruation, as well as how women experience menstruation differently; nevertheless, many men incorrectly described the start of menstruation or the average 28-day cycle. The nurse was more understanding about the diversity of women’s menstrual experiences in her KII at endline, compared to baseline.

Every woman is different and experiences periods differently. Feelings are not the same, some have cramps others don't; some few experience severe symptoms because of complications. – Nurse, KII, Endline

Finding 2: Limited knowledge gained around MHM as it relates to sexual and reproductive health

At baseline, many men and women employees were curious about MHM as it relates to sexual and reproductive health (SRH). Women employees reported in baseline FGDs that they wanted to learn more about the link between menstruation and reproductive health, irregular menstrual cycles (such as prolonged or skipped periods), common reproductive conditions that are linked to menstrual health and hygiene, and contraception-induced menstrual changes. Men employees reported in baseline FGDs that they wanted to learn about “safe days” (i.e., days when they could have unprotected sex with their sexual partners without worrying about a potential pregnancy) and their link to menstruation. Several women employees in baseline FGDs requested more information about managing menstrual pain without painkillers, as they worried that painkillers affect fertility. At endline, many women reported in FGDs that they still lacked knowledge on these issues, and they reported specifically wanting to learn more about endometriosis, fibroids, cysts, irregular and heavy periods, menopause, hormonal changes, clots while menstruating, and more. There were no marked changes in knowledge around these issues from baseline to endline, due in part to the intervention’s limited scope to address SRH.

Finding 3: Increased confidence to manage menstruation at work linked to improved knowledge

In baseline FGDs, women employees identified common MHM needs and expressed knowledge gaps related to managing their menstruation adequately. At endline, when asked in women’s questionnaires if they felt confident to manage their menstrual period at work, more women “strongly agreed” that they felt confident at endline (97 percent) compared to baseline (35 percent), which reflected a statistically significant increase (Wilcoxon $V=0$, $p<.001$) in confidence (Figure 25). Similarly, fewer women “disagreed” and reported that they didn’t feel confident at endline (0 percent) compared to baseline (8 percent). In endline FGDs, women shared that they learned new ways to manage menstruation through the intervention. According to endline FGDs, KIIs, and qualitative responses, some women employees, as well as the nurse, mentioned that WhatsApp BCC messages increased their awareness, information, and knowledge about MHM-related concepts.

We feel much more support...we didn't know how to maintain cleanliness [during] periods...the education [and] knowledge [about menstruation in the workplace] has been very helpful. Information can even be used to help others. – Woman employee, FGD, Endline

In endline FGDs, women employees expressed that despite fears about menstruation-related gossip, bullying, or shaming, they felt they better understood their own bodies and could identify certain symptoms related to menstruation. This increased understanding gave them confidence to ask for accommodations, or temporary adjustments in work duties, when needed.

Q: I feel confident to manage my menstrual period at work, including changing, disposing, or washing menstrual products. Do you [graph categories]?

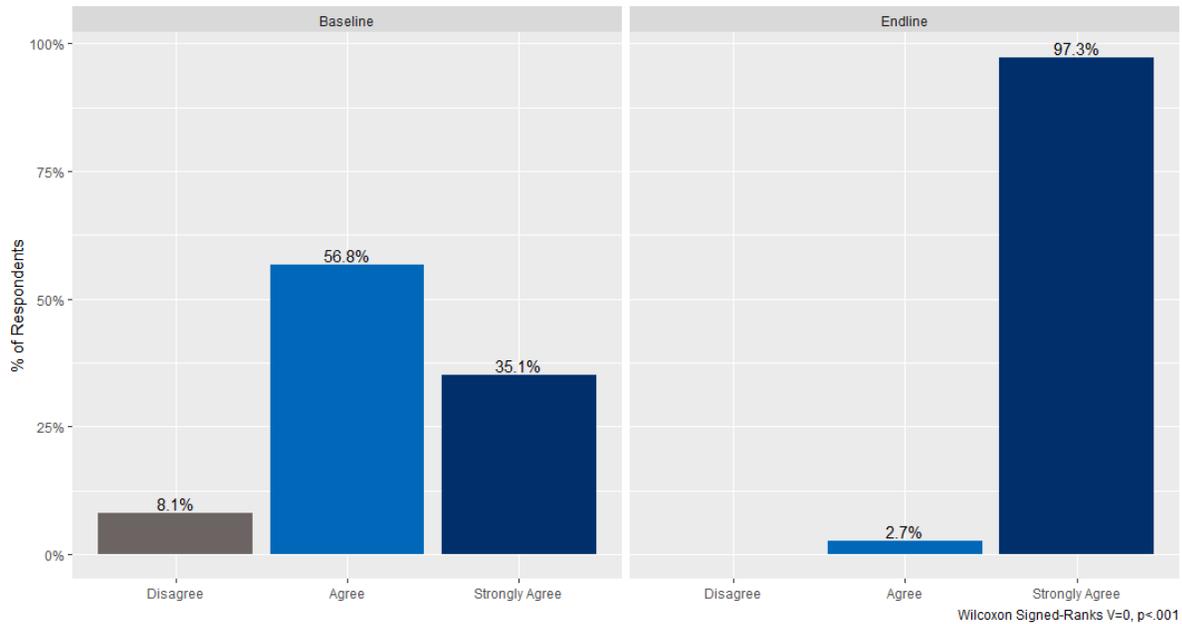


Figure 25. Changes between baseline and endline in women’s agreement that they feel confident to manage their menstrual period at work, including changing, disposing, or washing materials

4.2.2 ACCESS TO SAFE/HYGIENIC, AFFORDABLE, ACCESSIBLE, ACCEPTABLE, AND ABSORBENT MATERIALS OR PRODUCTS AND SUPPLIES

Finding 4: Improved access to a variety of menstrual products

At baseline, women’s responses in questionnaires showed that most women employees (97 percent) used disposable pads at work, though some used toilet paper (6 percent) and tampons (3 percent). As shown in Table 10, not everyone who used disposable pads reported preferring them; 87 percent of women preferred disposable pads, while 11 percent preferred reusable sanitary pads, 3 percent preferred period underwear, 3 percent preferred menstrual cups, and 3 percent preferred tampons. At baseline, women employees did not report using unsafe materials to absorb or catch their menstrual blood; however, the nurse reported in her endline KII that women formerly (i.e., before the intervention) used cotton wool as a menstrual product. She reported providing cotton wool to women who came to her with need for products, as she did not have access to pads. Although the use of cotton wool was not reflected in data from women’s baseline questionnaires, it is possible that women hesitated reporting use of unsafe materials due to internalized shame and social concerns.

Before [the intervention], some women used to use cotton wool and pads but most didn't know what was best to use. – Nurse, KII, Endline

The provision of safe and hygienic menstrual products to women employees at Company A as part of the intervention, partnered with product education sessions that covered appropriate use, reuse, and disposal (in the case of disposable pads), contributed to improved product knowledge and choice. In endline FGDs, women employees reported being more aware of the types of safe and hygienic menstrual products they could use to manage menstruation at work. Women reported that learning about and trying different types of menstrual products increased their options of products that best suited their needs. The nurse confirmed in her endline KII that product choice had expanded for women employees. The intervention generated specific interest about the menstrual cup among menstruating employees, many of whom had not used one prior to the intervention. Eight percent of women reported using menstrual cups in women’s questionnaires at endline, compared to zero percent at baseline, as shown in Table 10. Several women reported in the endline FGDs and in the questionnaires that they found the menstrual cup to be safe and comfortable. Some women, though, reported fear of using the cup, specifically fearing leaks or the cup’s effect on virginity. Still, some were uncomfortable washing a used cup at work. Regarding reusable pads, more women employees reported using reusable pads at endline (11 percent) than at baseline (0 percent). In endline FGDs, however, women employees expressed discomfort about using reusable pads at work because it was difficult to wash and dry used pads in the workplace. Instead, they preferred to use reusable pads in the privacy of their home where they could wash and dry them in a private setting. Overall, baseline and endline data suggested that women were empowered to make informed choices regarding menstrual products, possibly due to increased knowledge about different types of safe and hygienic products.

We have a wider choice of pads than what used to and different options. – Woman employee, FGD, Endline

Table 10. Women employees’ use and preference of menstrual products at work., for three most commonly cited products

Products	Used (% of women surveyed)		Preferred (% of women surveyed)	
	Baseline	Endline	Baseline	Endline
Disposable Sanitary Pad	97.3	91.9	86.5	91.9
Reusable Sanitary Pad	0	5.7	10.8	10.8
Menstrual Cup	0	8.1	2.7	10.8

Finding 5: Reduced financial burden associated with menstrual products

At baseline, menstrual products were reportedly not affordable in the market for employees or available in the workplace. As a result, many employees resorted to unsafe or unhygienic practices. Women employees shared in baseline FGDs that menstrual products were too expensive and that their incomes were too low to justify purchasing them. In a baseline FGD, some women employees shared that they would purchase pads when they had money, but when they did not have money, they would use toilet paper to absorb menstrual blood. Some women employees reported that they could not purchase pads in advance and would, therefore, only buy them when it was absolutely necessary (i.e., at the start of a period). At these times, women would leave the workplace to purchase pads and, due to the shame and stigma surrounding menstruation, they would provide vague reasons to supervisors for needing to go to the shop. Because menstrual products were not affordable and not available on site before the intervention, women employees reported in baseline FGDs that they purchased the cheapest pads that they could find and used them for longer than recommended. They did so even if low quality pads caused them physical discomfort and allowed blood to seep through to their clothing. Though women

themselves did not report using cotton wool, cloth, or other unsafe materials at baseline, a manager (man) suspected in his KII that some women used cloth in place of pads.

Pads may be unaffordable, and given that this is a cloth factory, she may resort to using cloths to manage her period. – Manager, KII, Baseline

If I have money, I go outside to buy [menstrual products] or use toilet paper when I don't have money. – Woman employee, FGD, Baseline

In women's endline questionnaires, more women (100 percent) reported that they were able to afford menstrual products every month, an increase from 76 percent of women who could do so at baseline. In endline FGDs, women reported a lower financial burden of purchasing menstrual products for work due to greater availability of menstrual products at work. Even men employees reported in endline FGDs that they felt the financial burden of purchasing menstrual products, which they had to do as primary income-earners for their families. Several key workplace influencers like the nurse and HR assistant recognized in their endline KIIs that purchasing menstrual products was financially burdensome for many menstruating employees. Some employees, motivated by the provision of products in the workplace, were interested in taking pads home to their families.

Finding 6: Reduced menstrual product-related anxiety at work

In baseline FGDs, women employees shared that they associated a substantial amount of psychosocial stress with menstruating at work. For many, menstruation-related stress stemmed from a lack of access to safe, hygienic, and affordable menstrual products in the workplace. Many women employees shared that they were anxious about leaking through their menstrual products (especially if they used inadequate material, like toilet paper) and staining their work clothes. Both men and women employees expressed in baseline FGDs discomfort about confronting someone with a menstrual blood stain on her outfit; for many women, leaking and staining was considered shameful because it was associated with being careless, according to baseline FGDs with women employees. Also, women employees were reportedly anxious that colleagues would gossip or shame them for their perceived inability to manage their period. Additionally, women employees reported in baseline FGDs that they didn't feel comfortable taking breaks to use the toilet, as it would disrupt production (see Finding 19: Improved productivity in a target-driven work culture) and provoke supervisors' anger (see Finding 11: Greater communication about menstrual needs linked to moderate gains in support provided by supervisor and manager to menstruating employees).

If you are using toilet paper [as a menstrual product] you fear that it will leak in front of men.
– Woman employee, FGD, Baseline

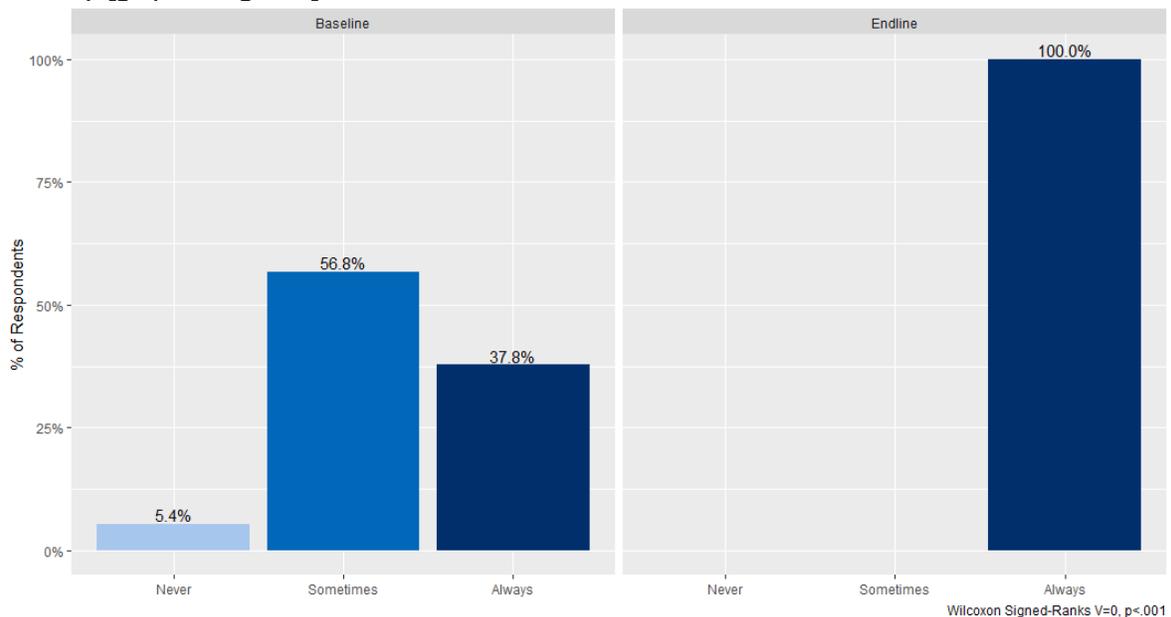
It is difficult to tell someone who has stained [their work clothes with menstrual blood] but you have to tell her because you cannot allow men to see her. – Woman employee, FGD, Baseline

At endline, many women expressed appreciation for the provision of pads and saw this act as a sign of a supportive environment, one where they could manage their periods in “peace.” According to endline FGDs and qualitative responses to women's questionnaires, access to free menstrual products in the workplace contributed to reduced employee anxiety about what to do if periods started unexpectedly at work. Several women reported in endline FGDs that they felt less stress while menstruating at work because they had reliable access to menstrual products and disposal bins. Data collected from women's

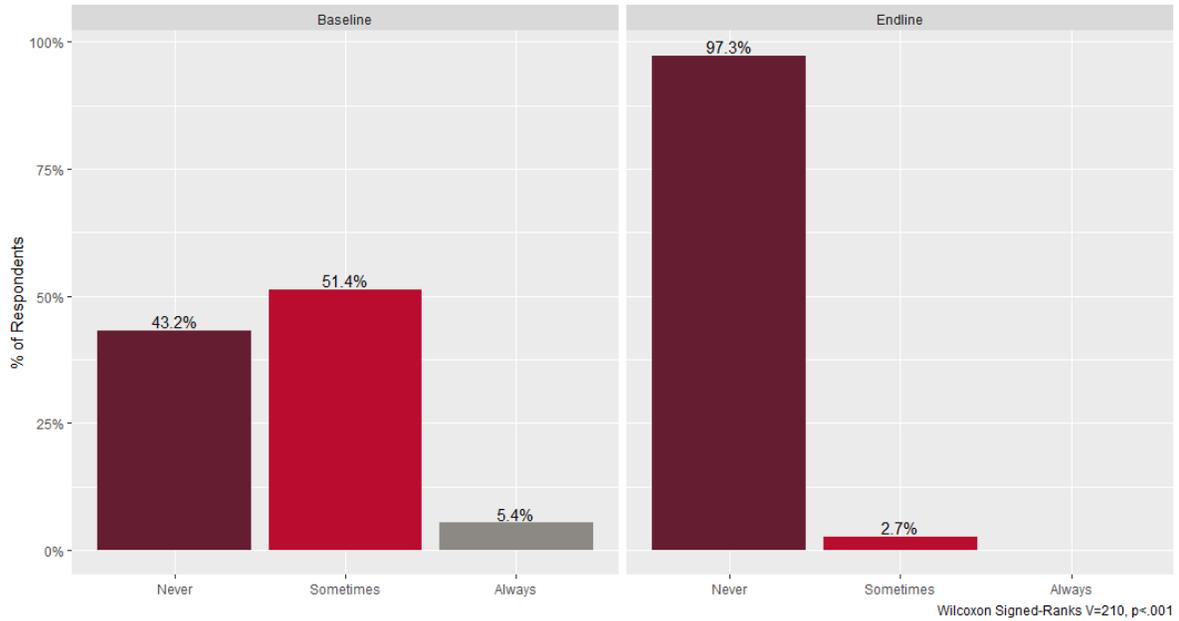
endline questionnaires showed reductions in factors that contributed to women’s product-related anxiety. For instance, more women reported that they “never” worried that their menstrual products would run out at endline (97 percent) compared to baseline (32 percent) (Figure 26), and more women “always” had enough time and opportunities to change their products at endline (95 percent) compared to baseline (70 percent). Women who only “sometimes” had time and opportunities to change products mentioned that it was because supervisors didn’t give them enough time and because supervisors were not understanding (see Finding 11: Greater communication about menstrual needs linked to moderate gains in support provided by supervisor and manager to menstruating employees). At endline, nearly all women (97 percent) “never” worried that blood would pass through their menstrual products to their outer garments, an increase from 43 percent at baseline, as illustrated in Figure 26. There was a similar increase in the proportion of women who “never” worried that their menstrual products would move from its original place, from 46 percent at baseline to 92 percent at endline (Figure 26).

Additionally, women employees reported more satisfaction with their menstrual products at endline than they did at baseline, which might have contributed to reduced product-related anxiety. According to women’s endline questionnaires, more women reported “always” being comfortable with their menstrual products at endline (100 percent) compared to baseline (68 percent) (Figure 26). Similarly, more women were “always” satisfied with the cleanliness of their menstrual products at endline (100 percent) compared to baseline (73 percent). More women were “always” comfortable carrying spare menstrual products to work at endline (100 percent) compared to baseline (70 percent) and more women were “always” comfortable storing leftover or cleaned products at work at endline (95 percent) compared to baseline (60 percent).

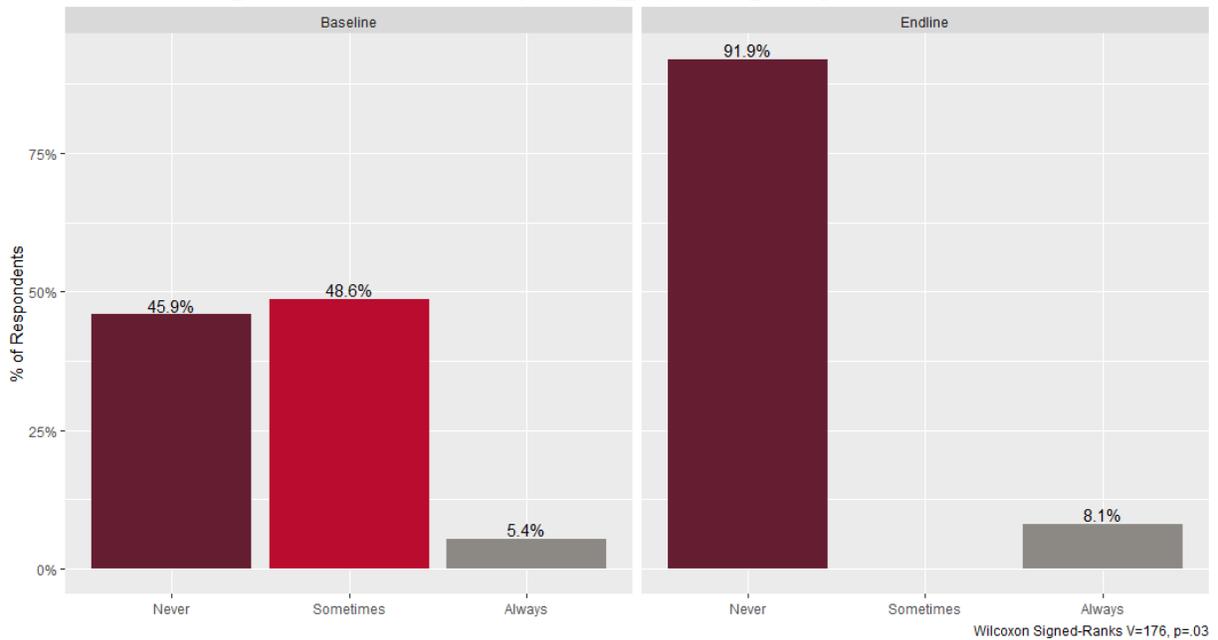
- a) Q: How often did you get more menstrual products at work when you needed to? Would you say [graph categories]?



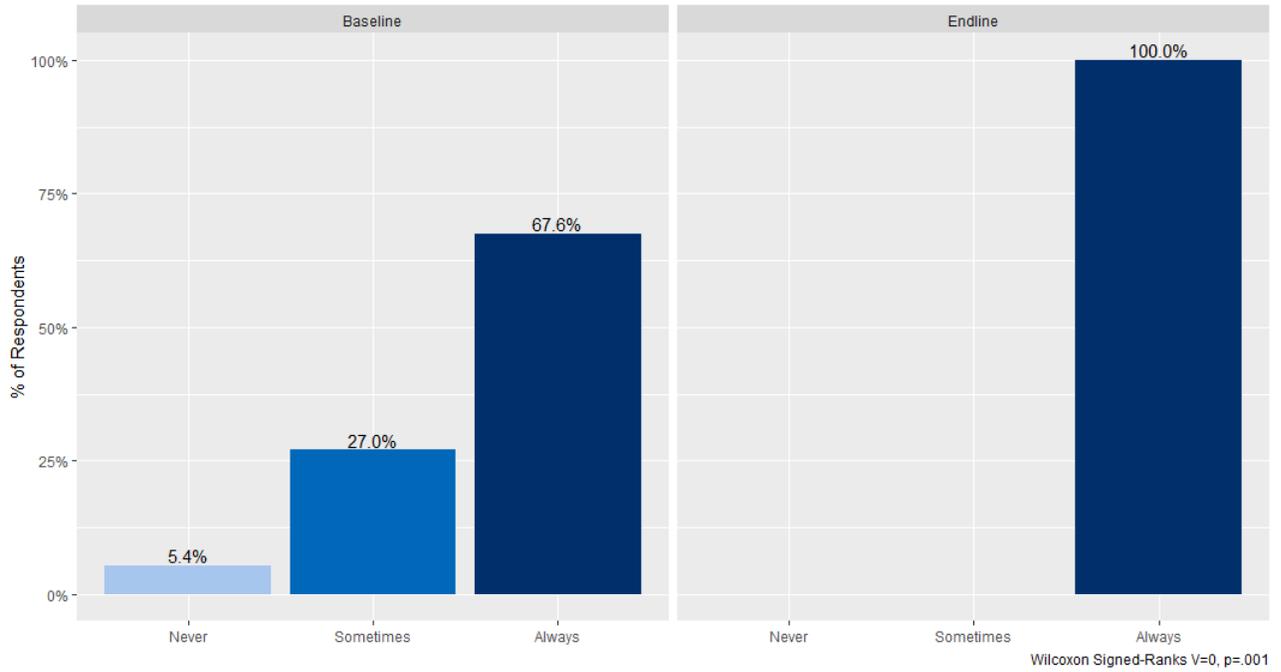
- b) Q: How often did you worry that your menstrual products would allow blood to pass through to your outer garments at work. Would you say [graph categories]?



c) Q: How often did you worry that your menstrual products would move out of place while you were wearing them at work. Would you say [graph categories]?



d) Q: How often did you feel that your menstrual products were comfortable at work. Would you say [graph categories]?



e) Q: How often were you satisfied with the cleanliness of your menstrual products at work? Would you say [graph categories]?

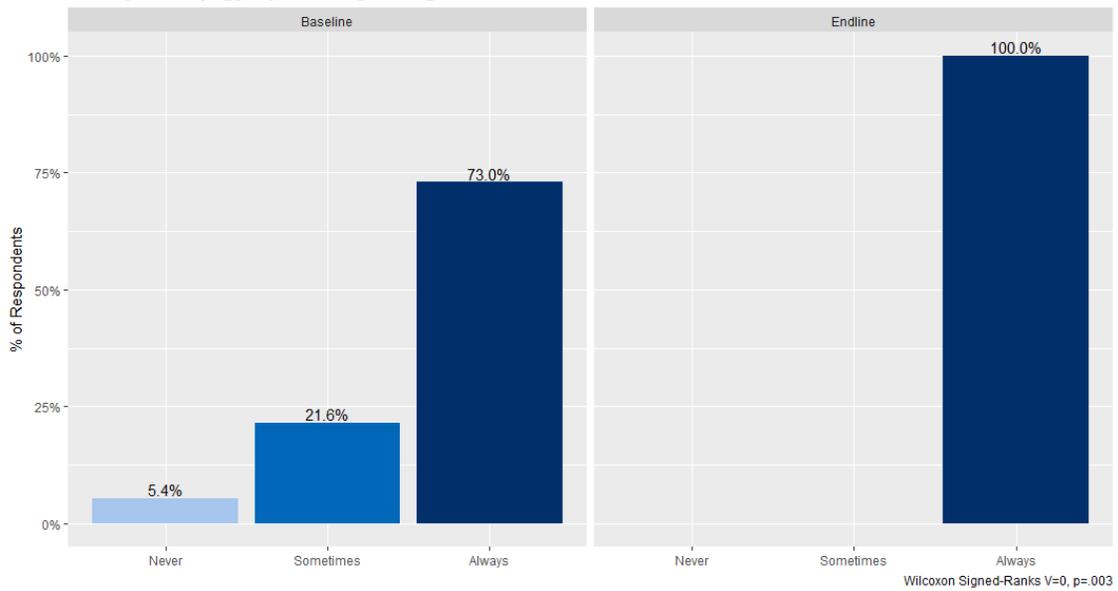


Figure 26. Changes between baseline and endline in women’s menstrual product-related anxiety.

4.2.3 ACCESS TO SAFE AND CLEAN FACILITIES THAT ARE EQUIPPED WITH SOAP AND WATER TO BATHE ONESELF AND CLEAN OR DISPOSE OF MATERIALS

Finding 7: Management’s understanding of the importance and need for female-friendly toilets contributed to infrastructure upgrades and increased supplies

At baseline, administrative staff and managers shared in KIIs that the workplace had improved its toilet infrastructure in the recent past to make it more female-friendly, such as building women’s toilets (where previously, only men’s toilets existed), providing menstrual disposal bins, and adding more toilets to reduce long walk times for women employees in some departments. Many administrative staff and managers assumed that the quality of toilets at baseline was adequate, even though most women and men employees reported otherwise in baseline FGDs and as was revealed during the infrastructure assessment (further details to follow). Following baseline research, the intervention team informed management about the toilet infrastructure quality, standards for female-friendly toilets, and recommended infrastructural upgrades, after which management invested in small- and large-scale infrastructural upgrades.

In endline KIIs, key workplace influencers (i.e., union representatives, cleaners, the nurse, MHM champions, and managers) reported that they understood the importance of female-friendly infrastructure. Several managers reported in endline KIIs that they appreciated the modifications to the infrastructure that made it more female-friendly over the course of the intervention. KIIs observed better hygiene among employees and noted the toilet infrastructure quality had improved. However, management’s reported understanding of employees’ infrastructure-related MHM needs did not necessarily extend to their perspective on toilet breaks; in endline FGDs, several women reported that they felt scrutinized for taking multiple toilet breaks.

Our toilets were not up to standard but now they are great! – General Manager, KII, Endline

Employees observed a significant improvement in cleanliness, quality, and availability of female-friendly workplace toilet infrastructure at endline compared to baseline, with some improvements pending at the time of endline data collection. At baseline, the infrastructure assessment revealed the ratio of women employees to toilets to be 6:1. This ratio falls within the UNICEF/WHO standard of 25:1⁵. However, women employees reported in baseline FGDs that toilets were unclean and were inconsistently stocked with soap and toilet paper. At endline, the ratio of women employees to toilets increased to 10:1, in large part due to the increase in the number of women employees employed at Company A. In endline FGDs, women and men employees reported that toilets were cleaner and that soap was more consistently available, although it was often diluted. Men employees shared in endline FGDs that women’s toilets looked so good that they thought they had WiFi. They admired how clean the toilets were and believed that women spent more time in them, compared to time spent in toilets before the upgrades. In addition to these changes, more toilet paper was available at endline for women employees than at baseline. However, men reported that they were not provided with enough toilet paper and, therefore, used cotton wool for anal cleansing. Women reported in endline FGDs that they desired a private space to wash their bodies, as well as to clean menstrual cups.

⁵ Adams, John, et al., (2009). Water, Sanitation and Hygiene Standards for Schools in Low-cost Settings. World Health Organization. Geneva.

4.2.4 SUPPORTIVE ENVIRONMENT IN THE WORKPLACE THAT ALLOWS WOMEN TO MANAGE THEIR MENSTRUATION WITHOUT FEAR OF STIGMA OR EMBARRASSMENT

Finding 8: Increased overall supportive environment

In baseline FGDs, women employees reported that their work environment did not support their menstruation-related needs. They cited as the main contributors to the unsupportive work environment the culture of silence around menstruation and a lack of understanding from supervisors and managers, as well as the target-driven and stressful workplace environment. In endline FGDs, women reported that they felt more supported in the workplace, more seen, and more appreciated, compared to baseline. More women reported in endline FGDs that the environment for managing menstruation at work was more “peaceful” compared to baseline. They were grateful for the increased support they received from colleagues at endline. Data from endline women’s questionnaires demonstrated that women’s perceptions of the supportive environment changed over the course of the intervention; there was a substantial and significant increase in mean support scores from 6.5 at baseline to 10.1 out of 12 at endline ($t=-7.16$, $p<0.001$). Men’s questionnaires revealed a similar change in men’s perceptions around support for MHM; mean scores among men increased, albeit not significantly, from 7.02 at baseline to 8.2 at endline ($t=-2.60$, $p=0.1$). In FGDs at endline, several men and women employees credited the MHM champion as a fundamental contributor to improving Company A’s work environment. Women employees voted to select an MHM champion when the intervention launched, and over the course of the intervention, the MHM champion participated in all intervention components. She established herself as a key resource at Company A and provided tangible and social support to menstruating employees.

Finding 9: Reduced menstrual stigma

At baseline, many employees shared misconceptions and misinformation around menstruation, which contributed to menstruation-related stigma in the workplace. In baseline FGDs, several men and women employees mentioned that menstrual blood was dirty; men employees elaborated that they considered menstrual blood to be dirty because of its smell and because this was how the body supposedly removed dirt. Additionally, in baseline FGDs and KIIs, many employees, supervisors, and managers reported that menstruation should be treated like a secret and that it should not be discussed in the workplace. Their attitudes contributed to the culture of silence around menstruation. They reported that they concluded a woman was menstruating based on her mood and energy changes. Some men also reported in baseline FGDs that they thought menstruation made their women colleagues more emotional, angry, rude, and difficult to work with. Some men supervisors shared in baseline KIIs that the loss of blood during menstruation made women weak. Other factors that contributed to menstrual stigma in the workplace included the reported belief among men employees that menstruation was a curse, which contributed to shaming women whose outer garments were stained with leaked blood.

[A period] is a woman removing dirt that is not needed by the body. – Union representatives, FGD, Baseline

It is difficult to handle a woman who is on her periods. She becomes emotional, angry and very rude. – Man employee, FGD, Baseline

[Menstruation] is supposed to be their secret. I don’t think it is fair for us to know or inquire. – Manager, KII, Baseline

BCC products and sensitization sessions for employees targeted some of the aforementioned misconceptions and provided accurate information about menstruation, in order to normalize

menstruation and reduce menstrual stigma. At endline, men and women employees reported in FGDs that they felt more open or “free” with each other and more understanding of employees’ menstrual experiences. Women shared in endline FGDs that even if men employees or others made menstruation-related jokes in the workplace, they felt confident to laugh it off, stand up to them, and joke back. By contrast, in baseline FGDs women reported taking offense at jokes about menstruation, and they reported feeling powerless to respond. Very few men employees spoke of menstruation as a dirty process in endline FGDs, as compared to baseline. In one endline FGD, when some men employees mentioned menstruation as dirty, other men employees corrected them. In an endline KII, the HR assistant reported that employees and staff treated menstruating employees more positively after participating in sensitization sessions. According to the assistant, the men no longer assumed menstruation to be a disease or curse, or something shameful.

There has been openness to talk about [menstruation] and lack of shame. Before [the intervention] it seemed that it was something bad that happened. Even if not with me, women are free with each other [after the intervention]. [Menstruation is] not a secret as before. – Woman supervisor, FGD, Endline

However, there were minimal changes in employees’ perceptions that changes to women’s moods is related to menstruation. Women supervisors, the nurse, and men employees noted in endline FGDs and KIIs that menstruating women were identifiable due to their moodiness, though some men employees in endline FGDs challenged this assumption made by their colleagues.

If I tell a male supervisor that I am on my period, he will take advantage. He will even count your days for you. When you have moods, even unrelated [to menstruation], he will say, “Those are your periods.” – Woman employee, FGD, Endline

Finding 10: Increased willingness to communicate about menstruation among menstruating employees and between employees and supervisors

At baseline, there was a strong culture of silence around menstruation in the workplace, which was (and remains) men-dominated. Women thought their menstruation-related experiences, challenges, and were viewed differently than other physical conditions like injury or pregnancy. In baseline FGDs, women said they managed menstruation silently because they thought their colleagues would gossip about them or shame them for menstruating. Women employees were also hesitant to ask their colleagues for an extra pad in case their need was linked to carelessness. As a result of these fears and the culture of silence, women did not communicate about their menstrual experiences and needs in the workplace, not even with the nurse; they chose instead to persevere and bear their discomfort silently.

You want to keep your period a secret so that people do not discuss or gossip about you and people start looking at you funnily. – Woman employee, FGD, Baseline

[Menstruation] is a woman's secret; you cannot tell anyone. If you tell anyone, everyone will know and look at you differently. – Woman employee, FGD, Baseline

As reported in their baseline FGDs and KIIs, supervisors and managers did not think that employees experienced menstruation-related issues, nor did they believe menstruating employees were treated differently than non-menstruating employees, possibly due (in part) to women’s silence about menstrual experiences. Some women employees reported in baseline FGDs that supervisors had chastised women for taking long walks to the nurse’s station or for reporting severe menstrual pain, accusing them of

trying to avoid work; such responses prevented women from talking to supervisors about their MHM needs. In baseline FGDs, some women supervisors reported feeling that management was not concerned about the health and well-being of women in the workplace. Women reported that they were held to unreasonable expectations and were asked to act “normally” or persevere while working. If they did not, they were considered immature, careless, and uncooperative.

It is not possible to get special provisions while menstruating because menstruation is not a visible problem like pregnancy or a leg injury, so you won't be believed and you therefore have to persevere. – Woman employee, FGD, Baseline

Women employees also perceived supervisors and managers to be unaware and unsupportive toward employees' menstruation-related needs. In addition to the little support received, women reported in baseline FGDs also feeling uncomfortable discussing MHM-related needs with supervisors, many of whom were men and older than many of the women employees at the workplace. Women believed it disrespectful, shameful, and culturally inappropriate to approach these men with menstruation-related concerns. Women employees also reported discomfort in approaching some women supervisors who were known or believed to be as unsupportive as men about MHM needs.

Supervisors are not supportive. They are very old so it is like telling your father, which is shameful. Supervisors are respected people, and it would be disrespectful [to talk about menstruation with them]. Supervisors are men; it is possible to tell a woman but not a man. – Woman employee, FGD, Baseline

I will not tell [my supervisor] directly that I am on my period, but I will tell him that “I am not okay today,” and he will understand. But then you cannot say it every day or every month. – Woman employee, FGD, Baseline

At endline, menstruating employees and supervisors reported being more open, direct, and confident about discussing MHM-related issues with each other. Women shared in endline FGDs that they spoke more openly about menstruation compared to baseline and that they were more likely to seek MHM-related support from workplace resources. In endline FGDs, many women employees encouraged and emphasized the importance of speaking up and being free to talk about menstrual issues; they discouraged the culture of silence in expressing menstruation-related issues in the workplace. Some women attributed their willingness to be more open about menstruation-related problems to the intervention, though a few women also credited their improved communication to an initiative taken by the company to hire more women employees. Increased communication and openness around menstruation at endline also manifested in some employees' reported comfort with openly carrying their pads around publicly, whereas some were still uncomfortable doing so.

Women used to be quiet but have now become open to talk freely. – MHM champion, KII, Endline

Unless someone speaks about their issues, you don't know. – Woman employee, FGD, Endline

What am I telling my supervisor? For me [menstruation] is private. – Woman employee, FGD, Endline

We feel good; at least they know what we go through and we can share freely. – Woman employee, FGD, Endline

I can now carry my pad proudly without secrecy. – Woman employee, FGD, Endline

In endline FGDs, several women reported that they were able to approach supervisors for menstruation-related support, that they felt confident about approaching them, and that supervisors shouted less frequently (in general) on the factory floor. Data collected through women's and men's questionnaires at endline revealed the following:

- More women (65 percent) thought their supervisors would “to a large extent” respond respectfully to an MHM-related question, an increase from 17 percent at baseline.
- More men reported thinking that supervisors/management would “to a large extent” respond respectfully to women's MHM-related concerns at endline (51 percent) than at baseline (28 percent).
- More women felt comfortable “to a large extent” with telling their supervisors they needed to leave work for menstruation-related reasons at endline (41 percent) compared to baseline (11 percent), as shown in Figure 27.
- More men employees thought that women employees felt comfortable “to a large extent” in telling their supervisors that they need to leave work for menstruation-related reasons at endline (24 percent) compared to baseline (14 percent).

Telling bosses [about menstruation-related concerns] has become better, and understanding about menstruation has helped a lot. It's more acceptable. – Woman employee, FGD, Endline

Supervisors [are] used to it now; you just say you have a headache or some other ailment, and they assume it's menstruation. They won't ask other questions, just respond [by] either giving time to go to the dispensary or rest. – Woman employee, FGD, Endline

Many supervisors were older men so there was no freedom to talk [about menstruation] before... Talking has helped in breaking culture [of silence around menstruation]. – Woman employee, FGD, Endline

Before, working with men was hard as they were not understanding [of menstruation-related concerns], but now, even men are understanding about menstruation. After education, they know how to handle women. They are being friendly. – Nurse, KII, Endline

Union representatives reported in endline FGDs that more women approached them to mediate conversations with supervisors, such as requesting temporary adjustments in work duties while menstruating. Nevertheless, several supervisors and managers shared in endline FGDs and KIIs that the persisting culture of silence around menstruation prevented women from being open with them about their menstruation-related concerns; this, in return, impeded their ability to know whether an employee was comfortable or if they needed more support.

A few women maintained in endline FGDs that they were not comfortable approaching supervisors directly about menstruation-related issues, preferring either to remain private about their experiences or ask for support in coded ways, for example by saying that they were sick or that they needed accommodations for a domestic problem. Some women employees reported using the term, “*Nielewe niko hivyo* [understand me, I am like that],” to indicate needing accommodation for menstrual-related

challenges. According to women in one endline FGDs, some supervisors behaved like they had no choice but to listen to women’s concerns (instead of genuinely caring about them). Several women mentioned in endline FGDs that they did not want their supervisors to see them as weak while they were at work; they worked as normal because they didn't know how to tell their boss about their menstruation-related challenges. Moreover, some women reported that a few supervisors were still hesitant about accepting menstruation as a valid issue in the workplace and were merely acting on “orders from above.”

Q: Do you feel comfortable telling your supervisors that you need to leave work for menstruation-related reasons? Would you say that you feel comfortable [graph categories]?

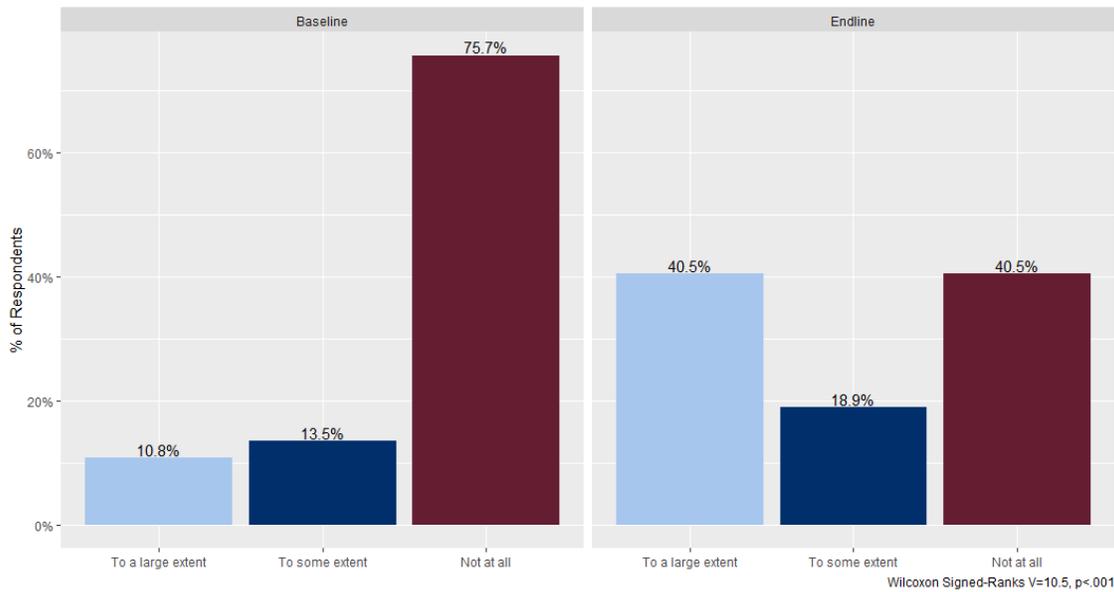


Figure 27. Changes between baseline an endline in women’s comfort with requesting menstruation-related leave

Finding II: Greater communication about menstrual needs linked to moderate gains in support provided by supervisor and manager to menstruating employees

Men supervisors reported in baseline FGDs that they felt pressure from management to meet production targets. As a result, many did not want to discuss personal issues with employees for fear that in doing so, employees would be more relaxed and not feel pressure to deliver against their targets. Men supervisors also reported worrying that women might take advantage of a supervisor’s sympathy to avoid work. Men supervisors shared additional perspectives about how to address employees’ MHM-related needs in baseline FGDs: some recognized the importance of building a good relationship with menstruating employees; a few were strict and intolerant toward anything that affected production; a couple did not think that menstruating employees faced unique challenges in the workplace; and several wished that menstruating employees would communicate more openly with them. Some women supervisors reported in baseline FGDs that employees should use their salaries to manage their MHM needs (a notion also reported by women employees in baseline FGDs), though others recognized that menstruating employees experienced valid menstruation-related concerns in the workplace. Union representatives mentioned in a baseline FGD that supervisors were generally unsupportive toward menstruating employees.

A woman may be operating a machine and has a male supervisor who may not understand why you are going out frequently [to manage menstruation]. The supervisor may interpret this as unwillingness to work or lack of interest in production. – Woman supervisor, FGD, Baseline

I was once told about a woman who approached her supervisor because she was experiencing severe period pain. The supervisor did not take her seriously and he thought that she was trying to avoid work and she ended up staining her dress. – Woman supervisor, FGD, Baseline

Overall, most employees reported at endline that women employees and supervisors enjoyed a better professional relationship with each other while at work, as women were more open about their menstrual needs. In FGDs and KIIs at endline, supervisors and managers, such as the HR manager, reported that they recognized the importance of understanding menstruation and how it affects employees. In endline FGDs and KIIs, managers and supervisors seemed more cognizant of menstruation's potential impacts on production, more open to considering temporary adjustments to work duties (such as providing lighter duties), and more receptive to women needing to take time off to manage their menstruation; however, some supervisors still suspected at endline that women would take advantage of their trust in order to get lighter duties.

In KIIs at endline, managers observed an improvement in company culture. They reportedly believed that the intervention helped them understand the needs of their employees while developing a sense of family and camaraderie. In his endline KII, the HR manager appreciated that the intervention was an opportunity to support employees beyond operational expenses (e.g., increasing the frequency of menstrual waste disposal, improving hygiene facilities, and hiring a female cleaner). In women's questionnaires, 97 percent of women employees reported that the presence of an MHM intervention in their workplace made them feel better about management's concern for its workers. Additionally, several men employees recognized in endline FGDs that a harsh workplace environment and harsh treatment of employees (e.g., shouting) were detrimental to the wellbeing of menstruating employees; they recognized that women needed a more supportive environment in order to be comfortable while menstruating at work (i.e., knowledge contributing to a supportive environment).

The environment has improved. We are now like a family. – General Manager, KII, Endline

Finding 12: Men's increased openness to speak about menstruation

The culture of silence around menstruation in the workplace (see Finding 10: Increased willingness to communicate about menstruation among menstruating employees and between employees and supervisors) extended to men employees. At baseline, men spoke about menstruation with hesitancy. They reported in baseline FGDs that if they saw a stain on a menstruating employee's uniform, they felt ashamed and preferred to alert another woman employee about it instead of alerting the employee with the stain directly. Through the intervention, some men participated in targeted men's engagement activities to break the silence around menstruation in Company A's heavily male-dominated work environment. In FGDs at endline, men reported being more comfortable to talk about menstruation with women colleagues. They reported feeling more comfortable approaching women who might have stained their work clothes and mentioned that they would offer to support these women in getting more products, should the need arise. The research team observed that men employees carried less shame and embarrassment when speaking about menstruation, in discussions with both colleagues and the research team.

Some men employees and personnel reported in endline FGDs and KIIs that they were excited about women seeming more empowered in the workplace and suggested that perhaps their wives might want to start working at the company. They also recognized the need for women to feel like they belonged in the workplace. Several women employees observed in endline FGDs that men engaged in more positive workplace banter with them at endline than they did at baseline. According to data collected through men's endline questionnaires, there were slight changes between baseline and endline in men's confidence in reporting someone who bullied, teased, or harassed a woman employee about menstruation to a supervisor or manager. At endline, fewer men (6 percent) were “not at all” confident to report, compared to 12 percent at baseline. In FGDs at endline, men also highlighted issues that they faced in the workplace, such as their lack of access to adequate toilet facilities. In an endline KII, a manager highlighted that men could use momentum from the MHM activity to advocate for their needs in the workplace, as well.

We know women are hardworking and loyal. We want them to have a sense of belonging. – Man employee, FGD, Endline

Men are already positive about [MHM in the workplace]. [Men] are now taking the same education home. – HR Assistant, KII, Endline

If women can talk about taboo topic like menstruation, why can't men talk about the issues they are struggling with? – Manager, KII, Endline

Finding 13: Greater workplace health support for menstruating employees

In baseline FGDs, women employees expressed that they did not trust the nurse and that they were not comfortable with consulting her to address their MHM-related needs. Women reported that their discomfort with the nurse stemmed from her gossiping about their experiences. Other than providing basic menstrual pain management, the nurse shared in her baseline KII that she had not encountered any issues related to employees' menstrual health. She recognized that she could only speak about employees who sought her help; if employees didn't reach out to her, she assumed that there was no problem. Moreover, she reported skepticism about the impact of menstrual education and providing menstrual products to employees because she believed that adult women should have already known how to manage menstruation.

I cannot tell the nurse [about menstrual needs] because I don't trust her. – Woman employee, FGD, Baseline

I don't know if they need to be helped. – Nurse, KII, Baseline

In her endline KII, the nurse reported more sympathy regarding the struggles of menstruating employees and a greater commitment to supporting them at work. She reported that the education session provided as part of the intervention (led by the Kenya activity's medical advisor, with a focus on patient-centered care and menstrual health in the workplace) gave her more understanding and courage to talk to employees about menstruation. She credited the WhatsApp BCC digital posters with educating women employees about menstrual pain management; she mentioned that these posters also encouraged her provision of painkillers and referrals to a doctor, when necessary. Data collected from women's endline questionnaires showed a modest increase in the percentage of women who felt comfortable going to the nurse for menstruation-related issues, from 62 percent at baseline to 78 percent at endline. Even at baseline, 14 percent of women still did not feel comfortable going to the

nurse at all, compared to 27 percent of women who reported feeling uncomfortable at baseline. Additionally, several women continued to report in endline FGDs that they did not approach the nurse, worrying that she would gossip about their private information.

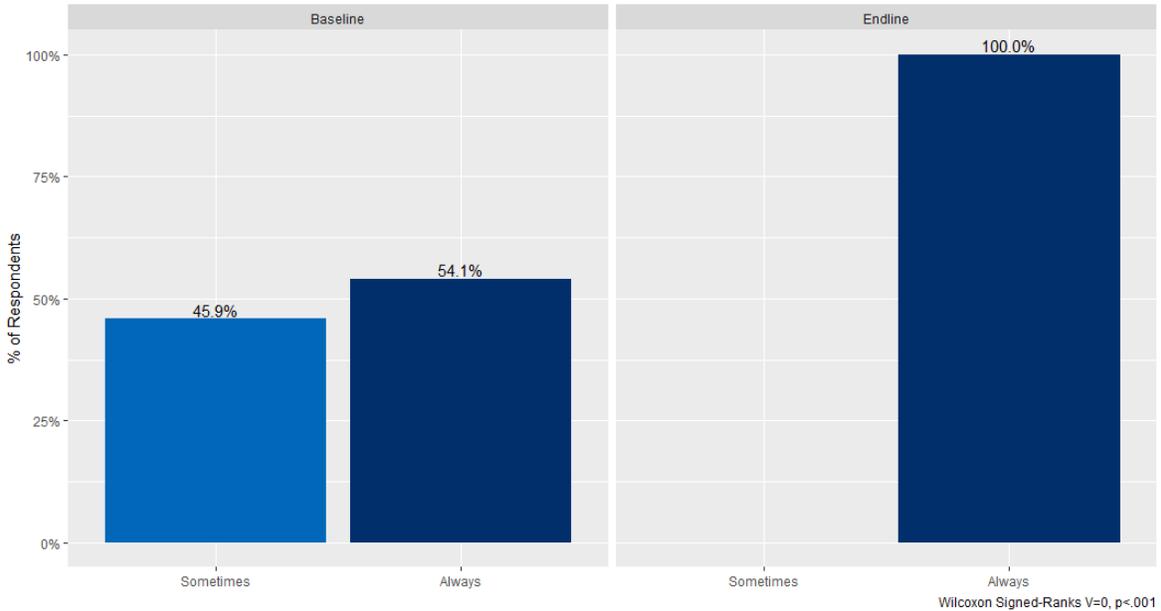
Additionally, data collected from baseline women's questionnaires revealed that three out of 45 women reported spending money on menstruation-related healthcare costs ranging from 750 to 2000 KSH (approximately 7 to 18 USD). At endline, no women reported spending money on menstruation-related healthcare costs, though the change in mean spending per woman from baseline to endline was not statistically significant ($t=1.58$, $p=0.121$).

4.2.5 IMPROVED MHM PRACTICES IN THE WORKPLACE

Finding 14: Reduced reliance on unhygienic menstrual materials and overwearing in the workplace

Increased access to free menstrual products in the workplace throughout the intervention allowed women to use pads as often as needed instead of rationing them, changing them infrequently, or relying on other unsafe practices. According to data collected through women's endline questionnaires, significantly more women reported that they could "always" get more products when they needed to at endline (100 percent) compared to baseline (38 percent) (Wilcoxon $V=0$, $p<0.001$). Similarly, more women reported that they had access to the products they needed for managing their last menstrual period at work at endline (100 percent) compared to baseline (95 percent), though it was not a significant change (Wilcoxon $V=0$, $p=0.35$). Additionally, Figure 28 shows that significantly more women reported that they "always" had enough menstrual products to change products as frequently as they desired at endline (100 percent) compared to baseline (54 percent) (Wilcoxon $V=0$, $p<0.001$). There was no substantial change in the number of times employees reported changing menstrual products on the heaviest day of their periods. Women employees reported in endline FGDs that the disposable pads provided by the activity were of significantly higher quality and absorbency than products previously purchased by women. Though products education sessions recommended more frequent changing of pads, women's wearing behaviors minimally changed over the course of the intervention, due in part to access to improved, more absorbent products.

a) Q: How often did you have enough of your menstrual products to change them as often as you wanted to at work? Would you say [graph categories]?



b) Q: How often did you get more menstrual products when you needed to? Would you say [graph categories]?

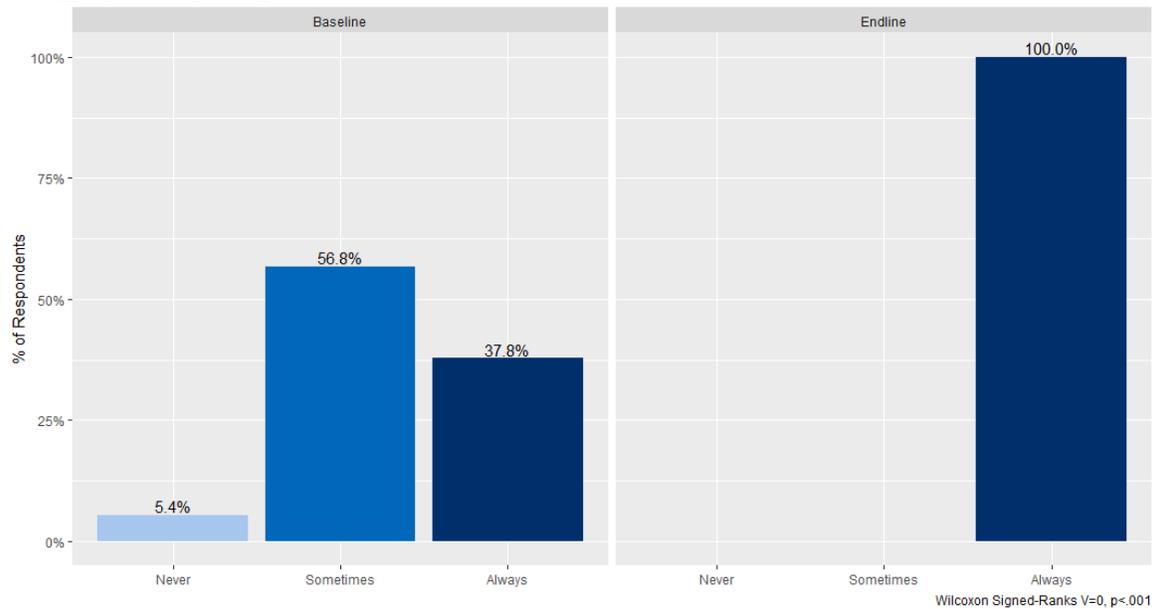


Figure 28. Changes between baseline and endline in women’s access to menstrual products

Finding 15: Improved menstrual disposal and hygiene practices

At baseline, the general manager mentioned in his KII that the factory contracted a company, Rentokil, to empty menstrual waste disposal bins from women’s toilet facilities two times per month. Though women had access to disposal services, there was little discussion at baseline about whether women used them appropriately. Early in the intervention, the company increased the frequency of menstrual waste emptying with Rentokil, and WASHPaLS affixed posters detailing how to dispose of menstrual

waste appropriately in these bins. At endline, women reported improved menstrual waste disposal practices, which they attributed to the addition of posters in toilet facilities. In endline women's questionnaires, 100 percent of women reported that they disposed of their used menstrual products in a bin in the latrine at endline, an increase from 97 percent who reported doing so at baseline. The HR manager also observed, in his endline KII, that better use and more frequent emptying of disposal bins resulted in fewer sewage blockages. In qualitative responses to women's endline questionnaires and endline FGDs, women mentioned that disposal posters in toilet facilities helped them understand how to dispose of used disposable pads and how to use disposal bins properly.

Illustration on posters...have done a commendable job. You know how to dispose of pads and what to do. – Woman employee, FGD, Endline

Despite these reported gains, the newly hired (at the start of the intervention) woman cleaner, who participated in a sensitization session and received BCC products, reported otherwise: In her endline KII, the cleaner mentioned that toilet facilities were cleaner at endline than at the start of the intervention, but some employees still did not flush their blood-soaked toilet paper properly. She added that interns did not use disposal bins properly. Used disposable pads were instead left on the ledge by the window for the cleaner to pick up and throw away.

4.2.6 IMPACTS ON WOMEN EMPLOYEES AND EMPLOYERS

Finding 16: Reported freedom and empowerment among menstruating employees

At endline, many employees mentioned that women in the workplace developed a sense of "freedom" after the intervention, which they did not mention at baseline. In FGDs at endline, many women and men employees expressed that women had the freedom to be open about their needs in the workplace, especially MHM-related needs. Employees, as well as the managing director, reported in endline FGDs and KIIs that the intervention empowered many women, and they seemed more free, active, and happy at endline, compared to baseline. In endline FGDs, several men and women employees observed that women seemed more confident in standing up for themselves and pushing back on negative comments related to their menstrual status.

The [intervention] has empowered women in a male dominated company. – Managing Director, KII, Endline

[Company A] is now a free environment where people understand [menstruation as normal]. – Woman employee, FGD, Endline

When [the USAID MHM in the Workplace activity] came, we became free; many [employees] now have started being more open [about menstrual] cramps. – Woman employee, FGD, Endline

Women are more free and active. There is no shame. – Man employee, FGD, Endline

Wako na freedom fulani [Employees have some type of freedom]. – Union representative, FGD, Endline

Finding 17: Workplace MHM intervention linked with gender equality

At baseline, women employees shared in FGDs that they were not adequately represented in decision-making roles, which restricted the visibility of their menstrual needs. Most managers, supervisors, and

employees were men; women were underrepresented in leadership roles, had less voting power than men, and found it difficult to formally share their concerns. Although the managing director was a woman, women employees considered her to be unapproachable because of her seniority. Underlying gender inequality and restrictive gender norms amplified the challenges that menstruating employees faced at work. Women employees reported in baseline FGDs that they were treated as inferior by men colleagues. In a baseline KII, a manager expressed hesitation about improving MHM in the workplace, mentioning that giving more attention to women was discriminatory toward men.

There is no gender equality. – Woman employee, FGD, Baseline

At endline, by contrast, the company seemed to be more cognizant of gender disparities among employees. Around the same time as the intervention's onset, the company implemented efforts to develop a more gender equitable workplace, which included hiring more women. Several employees credited these leadership-driven, institutional changes with advancing gender equity in the workplace.

Throughout the intervention and at endline, the managing director was vocal about her support for improving MHM and the experiences of women in the workplace.

We have to make women confident. They have the right to work here just like the men. – Managing Director, KII, Endline

The women are still few so sometimes they feel like their voice is not being heard. – Managing Director, KII, Endline

The [MHM in the Workplace activity] helped the company realize that there are gaps in terms of how women are treated at work, especially due to the fact that men believe they are better than the women. – Managing Director, KII, Endline

Women employees reported feeling more respected in endline FGDs, and the HR manager observed in his endline KII that women employees seemed to feel they belonged at Company A. In their endline FGDs, union representatives observed that the workplace was designed with men in mind, and that they had never before considered the needs of women. For example, the factory used strong chemicals and some departments, like ones with boilers, were very hot and possibly exacerbated women's discomfort while they were menstruating. Some supervisors shared in endline FGDs that they continued to rely on men employees in order to meet their targets, adding that a few men would complain if they were paired up with women because men felt they were doing most of the work. In endline FGDs, some men supervisors reported believing that a few women struggled with physically demanding jobs, like loading. Nevertheless, several supervisors mentioned in endline FGDs that women were often more productive and reliable than men employees.

[Women] feel proud and seen and recognized among the men in the factory. They also feel lifted [up] and feel like part of the organization. – HR Manager, KII, Endline

Although the intervention focused on improving MHM in the workplace, many employees conflated the intervention with a separate Company A-led initiative to hire more women employees. Several company leaders and employees commended this change and saw its benefits in the workplace. However, it is possible that this conflation contributed to greater dissatisfaction expressed on the part of several men employees about having to work with more women in the workplace, whom these men reportedly viewed as weaker. In endline FGDs, some men employees and men supervisors shared that they preferred a less gender equitable workplace. Some men reported in endline FGDs that it seemed as if

the managing director cared more about women, seeing that the intervention targeted and benefited women more than it benefited men.

The infrastructure assessment at endline revealed that sanitation conditions were still poor for men. Although the intervention contributed to improved conditions for women's toilet facilities, men's toilets were still inadequate, according to employees at endline. Some men employees reported again at endline (as they did at baseline) discontent with interventions that support women's conditions at work, while men reported that they were still financially burdened.

Finding 18: Reduced absenteeism linked to the provision of menstrual products

In baseline FGDs, women employees shared mixed perspectives about whether menstruation contributed to absenteeism. Some women employees reported in baseline FGDs that they missed work because of menstruation, while some noted that absenteeism due to menstruation was not very common at Company A. Women reported that some of their colleagues took leave on the first day of their period to manage menstruation, even though this meant foregoing wages, as leave without a doctor's note was considered unpaid leave. The perception of menstrual leave among administrative staff, supervisors, and managers was also reportedly mixed. In baseline FGDs, women supervisors reported believing that mature employees should be able to manage their menstruation at work without needing to take leave. Some supervisors shared in baseline FGDs that they were hesitant to encourage menstruation-related leave because it could affect production (see Finding 19: Improved productivity in a target-driven work culture). Other supervisors approved women employees' time off without asking why they were requesting leave. These supervisors reported that they assumed the time off might be related to menstruation. In a baseline KII, a manager shared that time off was appropriate for pregnancy-related reasons, but not for menstruation.

Some women miss work because of periods, and [MHM] support may reduce absenteeism. – Woman employee, FGD, Baseline

No one has come to ask for permission to leave early or to take a break [due to menstruation-related reasons], because they are mature and they know how to manage themselves.... At work, they have to put effort and work as usual. Besides, they are used to living with periods. People here are mature. – Woman supervisor, FGD, Baseline

If you become lenient, you are encouraging absenteeism, and that will affect production. – Supervisor, FGD, Baseline

Absenteeism happens only during pregnancy but not during menstruation. – Manager, KII, Baseline

Overall, rates of reported menstruation-related absenteeism decreased at endline. Data collected from women's endline questionnaires and shown in Table 11 revealed that mean days missed per woman due to menstruation-related reasons decreased from 0.3 days at baseline to 0.0 days at endline. Similarly, mean hours missed per woman due to menstruation-related reasons decreased from 1.2 hours at baseline to 0.0 hours at endline. There was a statistically significant reduction in absences, from a combined mean of 3.9 hours per month to 0.03 hours per month ($t=2.3$, $p=0.03$). In endline FGDs and KIIs, women employees, managers, and supervisors noted a discernible decrease in rates of absenteeism among women employees, which women attributed to being able to access menstrual products in the workplace. However, the HR Manager, male supervisors, and some men employees reported difficulty in

differentiating between menstruation-related and general absenteeism because women often cited “domestic issues” as their reason for requesting leave, whether menstruation-related or otherwise. In women’s endline FGDs, some shared that they felt more comfortable requesting leave for menstruation-related reasons, while others reported a preference to conceal menstruation when requesting leave. Women’s reported increase in comfort to request menstruation-related leave presented a potential lack of congruence with the reported decrease in absenteeism at endline; however, women’s reported increased comfort to request menstrual leave might not have resulted in actually requesting and taking time off, as women also expressed increased confidence to manage their menstruation at work (see Finding 3: Increased confidence to manage menstruation at work linked to improved knowledge).

If [women] don't come [to work] today...they come and say it was a 'domestic issue.' [They] don't differentiate that it is because of menstruation. The women are still having stigma/shame not to talk [about menstruation]. – HR Manager, KII, Endline

Before [the intervention], we couldn't take absenteeism [for menstruation-related reasons] easily but now can. – Woman employee, FGD, Endline

Table 11. Changes between baseline and endline in women employees’ absenteeism

	Baseline	Endline	T statistic	P value
Mean days missed by women employees due to menstruation-related reasons, per woman	0.3 days	0.0 days	1.8	0.09
Mean hours missed by women employees due to menstruation-related reasons, per woman	1.2 hours	0.0 hours	3.9	0.0004
Percentage of women who missed part of a workday due to menstruation-related reasons	40.5%	2.7%	4.7	0.000

Finding 19: Improved productivity in a target-driven work culture

Several employees noted at baseline that menstruation could impact employees’ productivity and work performance, especially if workplaces did not support employees’ MHM needs. In FGDs at baseline, women employees shared that the following MHM-related issues affected their ability to meet production targets: menstruation-related discomfort (especially when operating machinery), menstrual pain, and anxiety and stress related to finding menstrual products. According to baseline KIIs, some managers did not believe that menstruation affected employees’ productivity or work performance in visible ways. Some women concurred in baseline FGDs, mentioning that they worked hard to conceal any effects of menstruation on their work duties in order to succeed in a men-dominated workplace. One manager shared in a baseline KII that it was important to support menstruating employees, especially if not supporting them would negatively affect production.

If you are not comfortable [due to menstruation-related reasons], your production can go down, but we are used to persevering because if you are slow, you will be scolded, yet you cannot explain the reason why you are slow. – Woman employee, FGD, Baseline

Sometimes [menstrual] pain can prevent one from working, but you have to keep going and soldier on, even if you are in pain, so that production is not affected. If you are stuck, you can ask a friend to relieve you and tell them that you have a headache. – Woman employee, FGD, Baseline

It is important for managers and leaders to understand menstruation because in industry, production is important, but some situations including menstruation may pose a challenge for production. – Manager, KII, Baseline

Many women shared in baseline FGDs that they felt pressured to persevere through menstruation-related discomfort, pain, and unmet MHM needs in order to meet production targets. Many employees reported feeling pressure from management to meet production targets. Women employees reported in baseline FGDs that the focus on productivity often overrode any consideration of wellbeing, which left women feeling demoralized and unsupported. However, some women internalized the target-driven needs of their workplace and did not believe that the workplace needed to support them. The pressures of a target-driven environment reportedly exacerbated women's psychosocial stress and menstruation-related discomfort. Women employees mentioned in baseline FGDs that duties that required standing for many hours increased women's discomfort, as did not being able to rest (resting would be grounds for punitive action from supervisors).

You have to be productive even if you are on your period. You have no choice. – Woman employee, FGD, Baseline

You are here to work; you are not here to be supported or understood. – Woman employee, FGD, Baseline

At endline, administrative staff and employees reported that productivity improved during the intervention time period, which they attributed to a less stressful and more supportive work environment for women. Several men employees observed in endline FGDs that having access to pads in the workplace prepared women to meet production targets. Some women employees mentioned in endline FGDs that supervisors were more understanding about how women's experiences of menstruation could impact production while others were not.

In the weaving department you are required to stand up to eight hours...so you can imagine if you have a heavy flow or pain, supervisor will not understand. – Woman employee, FGD, Endline

The HR manager, in his endline KII, reported that production improved because menstruating employees were able to effectively compensate for any impact that menstruation and associated needs had on their work. Union representatives and women employees reported (in endline FGDs) that some departments were more supportive toward menstruating employees than others, which affected productivity.

The intervention might have contributed to how women perceived their work-related self-efficacy and productivity while menstruating. At endline, women reported understanding the ways in which menstruation and unmet MHM needs could impact their work performance; they also reported increased personal empowerment to address these needs. Some women underscored in endline FGDs that they did not want special treatment for menstruating, rather they wanted colleagues to understand them better and reduce obstacles that disproportionately affected them.

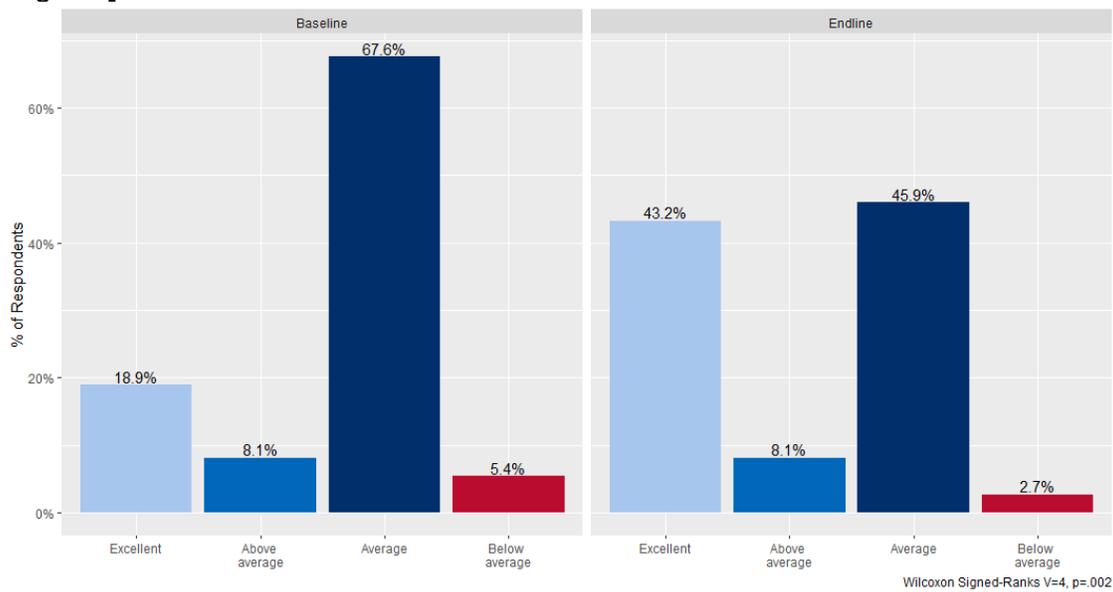
We don't want sympathy. We want to be understood. – Woman employee, FGD, Endline

According to women's endline questionnaires, significantly more women rated the quality of their work as "excellent" while on their period (43 percent) compared to baseline (19 percent) (Wilcoxon $V=4$, $p=0.002$) (Figure 29). Significantly more women reported feeling "very confident" that they could meet

personal production targets while on their period at endline (46 percent) than they did at baseline (27 percent) (Wilcoxon $V=80$, $p=0.01$) (Figure 29). Furthermore, more women “strongly agreed” that they were able to finish hard tasks at work despite having their period at endline (54 percent) than at baseline (38 percent), and more women “disagreed” that the stresses of their job were harder to handle because of their period at endline (84 percent) compared to baseline (49 percent). Presenteeism is another measure of productivity in the workplace and includes a measurement of employees’ diminished performance while at work. Using data collected from the women’s questionnaire and the Stanford Presenteeism Scale (SPS-6), presenteeism scores assessed changes between baseline and endline (with higher presenteeism scores equating to lower productivity). The mean score decreased from 8.8 at baseline to 6.8 at endline, though this decrease was not statistically significant ($t=-1.95$, $p=0.06$).

Despite these improvements, several men and women employees maintained in endline FGDs that women continued to persevere through their menstruation-related discomfort and stress to meet production targets, especially because they were afraid of supervisors’ reprimand. Supervisors in some departments were reportedly more open to allowing temporary adjustments in work duties for menstruating employees, such as offering lighter duties and more breaks. However, not all supervisors were able to offer accommodations to menstruating employees; in endline FGDs, some supervisors mentioned that the tasks performed in their departments did not have less intense equivalents.

a) Q: How would you rate the quality of your work while on your period? Would you say it is [graph categories]?



b) Q: How confident do you feel that you can meet your personal production targets on time while on your period at work?

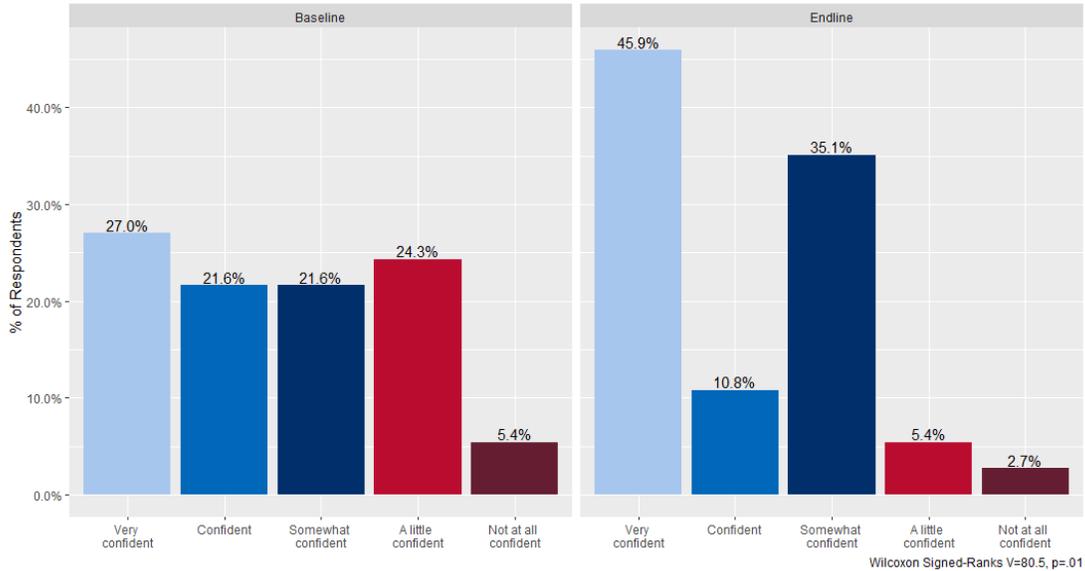


Figure 29. Changes between baseline and endline in women’s reported self-efficacy

Finding 20: Improved job satisfaction

At baseline, women employees shared in FGDs that having access to menstrual products in the workplace and greater social support would improve their job satisfaction. Male supervisors postulated in their baseline FGDs that women employees would feel happier and more valued if they were better supported at work. According to women’s endline questionnaires (Figure 30), 100 percent of women reportedly felt that their job satisfaction had improved since last year, compared with only 46 percent who reported an improvement in job satisfaction at baseline. In endline FGDs, women employees reported greater job satisfaction than at baseline, which they attributed to menstrual products being reliably available, lower cost incurred in purchasing menstrual products, improvements in workplace toilet facilities, and increased understanding from supervisors. They also expressed at endline a greater awareness that menstruation-related distractions could affect their job satisfaction. Additionally, women reported in endline FGDs feeling that they belonged at Company A, and they reported feeling a sense of family and camaraderie with their fellow employees. Improved reported job satisfaction might have extended to employees’ perspectives on retention, as well; according to women’s endline questionnaires, 87 percent of women thought that the presence of MHM changes at the workplace would render workers less likely to look for work elsewhere, and 79 percent of them reported that they were more likely to stay in their job because of the availability of on-site MHM support.

Q: Compared to this time last year, would you say your satisfaction with your job has improved, stayed more or less the same, or worsened, overall?

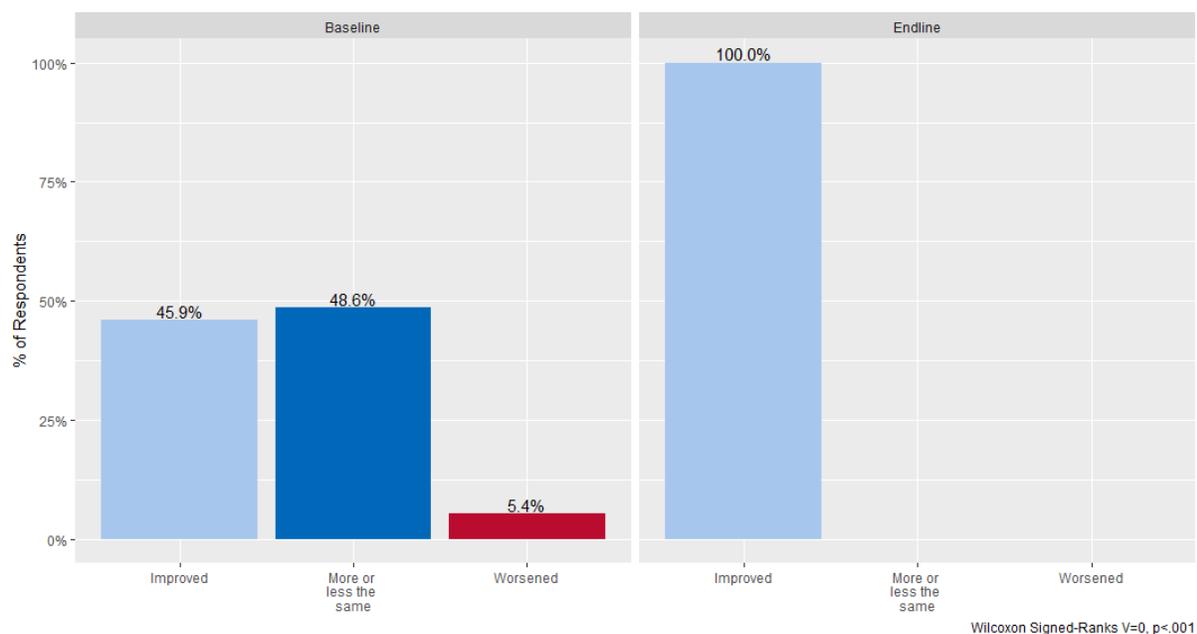


Figure 30. Changes between baseline and endline in women’s job satisfaction

Finding 2I: Improved corporate reputation

At endline, several men employees reported in FGDs that Company A’s menstrual product distribution efforts were well-known in the local community, such that more women desired to work for the company. Some men expressed excitement about women feeling more empowered in the workplace and suggested that their wives might even want to start working at the company. Some women employees observed in FGDs at endline that women interns desired to work at Company A because they heard that women were provided with pads. Additionally, according to the women’s endline questionnaire, 100 percent of women respondents thought that a worker would be more likely to work at a company that provided MHM support and services over one that did not.

4.3 WORKPLACE 2: KENYA COMPANY B

Below are findings from the garment manufacturing company, Company B. These findings reflect outcomes from five months of the workplace intervention and are organized by the themes that emerged from baseline/endline comparative data analysis.

4.3.1 AWARENESS, INFORMATION, AND SELF-CONFIDENCE REGARDING MENSTRUAL HYGIENE

Finding I: Limited increase in MHM and SRH knowledge

Though the intervention yielded promising developments at endline, by design, it did not address a few factors related to employees’ management of their menstrual health and hygiene in the workplace. There was a notable information gap regarding the physiology of menstruation and other basics about menstrual health and hygiene at Company B, which many women and men employees mentioned during

FGDs at baseline. Additionally, several women and men employees shared misinformation and misconceptions about menstruation, such as the following: menstruation is dirty; menstruation is a process for removing dirt from the body; painkillers are dangerous for women; bleeding during menstruation occurs because an unfertilized egg has burst; menstrual blood contains sexually transmitted infections (STI), regardless of whether a woman did or did not have an STI prior to menstruating; and more. Men accounted for most of the misinformation and misconceptions at Company B; there were more misconceptions overall at Company B than at Company A. At endline, many of these misconceptions were upheld, though several women reported that they had learned menstruation was not dirty.

Menstruation is the process of removing dirt from the body. – Man supervisor, KII, Baseline

Menstruation is as a result of the body developing and knowing how to get rid of dirt. – Man supervisor, KII, Endline

The stagnation in knowledge is likely because the intervention at Company B did not include in-person education and behavior change sessions for men and women employees outside of the products' education sessions to women. Had they been implemented, in-person sessions would have addressed employees' limited knowledge about menstruation, the misinformation and misconceptions around menstruation, and norms underpinning menstrual stigma in the workplace.

Many employees were curious about the links between menstruation and reproductive health, such as causes of irregular bleeding and contraception-induced bleeding changes, at both baseline and endline. Questions regarding SRH were more prominent at Company B than Company A. However, the intervention did not address these issues, as sexual and reproductive health-focused components were beyond the scope of this activity.

Women go through contraceptive related challenges such as heavy or irregular bleeding and they can benefit from a training on contraception. – MHM champion, FGD, Endline

Finding 2: Increased self-confidence among menstruating employees in managing periods at work

In FGDs and KIIs that took place at baseline, employees acknowledged that menstruating employees did not have confidence in managing their MHM-related needs and issues at work. In FGDs, KIIs, and additional qualitative responses provided during women's questionnaires at endline, a few women employees reported higher comfort and confidence in managing their menstruation at work, though some still did not feel confident asking for help with accessing disposable pads. The reported increase in confidence and comfort to manage menstruation at work, as per endline FGDs, was less at Company B than at Company A. At endline, a supervisor reported that women exhibited increased confidence in talking about menstruation.

Women are more free and confident to discuss menstruation; before [the intervention], they didn't think of it as normal. – Supervisor, FGD/KII, Endline

Moreover, data collected through women's questionnaires suggested a statistically significant increase in women employees' self-confidence in managing their menstruation at work at endline compared to baseline. Women were asked if they felt confident to manage their menstrual period at work, including changing, disposing, or washing materials, with five response categories spanning "strongly disagree," which was coded as 1, to "strongly agree," coded as 5. Mean scores were constructed for responses at

baseline and endline. At baseline, women employees reported a mean self-confidence score of 4.4, which increased to 4.9 at endline ($t = -6.21$; $p < .001$).

Finding 3: Increased knowledge regarding proper disposal of menstrual products

BCC posters contributed to women employees' increased knowledge about and practice of proper menstrual waste disposal. Many employees reported in endline FGDs and women's questionnaires that they found BCC posters in the toilet facilities to be especially helpful, with 96 percent of women finding them to be "very helpful" and 2.5 percent finding them to be "helpful."

4.3.2 ACCESS TO SAFE/HYGIENIC, AFFORDABLE, ACCESSIBLE, ACCEPTABLE, AND ABSORBENT MATERIALS OR PRODUCTS AND SUPPLIES

In FGDs, women employees expressed that the most significant component of the intervention for them was the consistent supply of free, safe, and hygienic menstrual products at work.

Finding 4: Increased product access and choice due to the provision of menstrual products at work

In baseline FGDs, women employees reported that they used disposable pads, toilet paper, and scrap cut pieces of cloth to absorb or catch their menstrual blood. Many supervisors, managers, and key workplace influencers⁶ also reported that women employees used scrap cut pieces of cloth as menstrual products. In endline FGDs, women employees and supervisors reported that they enjoyed using Nia disposable pads (provided through the intervention), and despite initial hesitation they appreciated the opportunity to try using menstrual cups. Before the intervention, women reported that they had not had the opportunity to try out various menstrual products to determine which ones best suited their needs. Through the intervention, women received education about disposable pads, reusable pads, and menstrual cups, and they were able to try this suite of products to determine which ones they preferred most. Quantitative data collected through the women's questionnaire revealed a similar but slightly different breakdown of products used.

Table 12. Women employees' use and preference of menstrual products at work., for three most commonly cited products

Products	Used (% of women surveyed)		Preferred (% of women surveyed)	
	Baseline	Endline	Baseline	Endline
Disposable Sanitary Pad	100	88.6	84.0	86.4
Reusable Sanitary Pad	2.3	13.6	20.5	27.3
Menstrual Cup	0	18.2	11.4	27.3

Table 12 shows that at baseline, all women reportedly used disposable pads to catch or absorb their menstrual blood at work, with very few reporting using other materials, like cloth, reusable pads, and even a piece of mattress. Though women reported using "disposable sanitary pads" in questionnaires, a number of respondents (i.e., factory manager, HR manager, worker relations representative, and women) in baseline KIs and FGDs asserted that women employees use cut pieces of cloth to manage menstruation at work. It is possible that women responded with "disposable sanitary pads" in baseline

⁶ The term *key workplace influencers* will be used to describe staff in workplaces who influence employees' MHM experiences, such as first aid providers, worker relations representatives, and MHM champions.

questionnaires because of social desirability bias, not wanting to share that they used other materials because they worried about stigma associated with using scrap cloth. Using spare cloth to manage menstruation at work was reported at Company A at baseline, though was less common than at Company B. In endline FGDs with women employees, the use of cut pieces of cloth was not reported, perhaps due to women's access to menstrual products through the intervention. In endline questionnaires, fewer women reported using disposable pads (89 percent), compared to baseline (100 percent). More women reported using reusable pads (14 percent) and menstrual cups (18 percent) at endline than they did at baseline, indicating that women started using a more diverse suite of products during the intervention (Table 12).

At endline, more women preferred to use reusable pads and menstrual cups at work, likely because they knew about and had access to these products. The intervention generated a lot of interest about the menstrual cup among women employees, many of whom had not known about or used this product prior to the activity. Over the course of the intervention, menstruating employees developed more learned experiences to share with each other regarding how to use different menstrual products and how to find ones that best suited specific menstrual needs, which they reported during FGDs at endline. Women employees liked the menstrual cup because it 1) provided an alternative method to manage their menstruation when they ran out of disposable pads; 2) could be worn for an extended period of time; and 3) was well-suited for those who experienced prolonged menstrual bleeding. Though they did not adopt other recommended infrastructure changes, Company B installed private taps in toilet stalls for washing; these taps allowed menstruating employees the freedom to change and wash their menstrual cups privately, and some reported doing so. Company A did not install the taps. During endline FGDs, several women employees shared that they did not prefer reusable pads because 1) they worried about carrying foul-smelling, used reusable pads around at work; 2) they were uncomfortable with washing their menstrual blood from reusable pads at work; 3) they were uncomfortable with storing blood-soaked pads alongside food in workplace lockers; and 4) a few employees' reusable pads leaked, allowing blood to seep onto their outer garments. Employees who liked reusable pads reportedly used them at home, where they could be washed with greater privacy. Table 12 shows that more women preferred to use these reusable products compared to those who reported using them, perhaps because of challenges associated with washing and reusing these products at work.

We learned about the different menstrual products available, which has increased options for us. – Supervisor, FGD, Endline

We didn't know about the cup, but now we use it and find it comfortable. – Supervisor, FGD, Endline

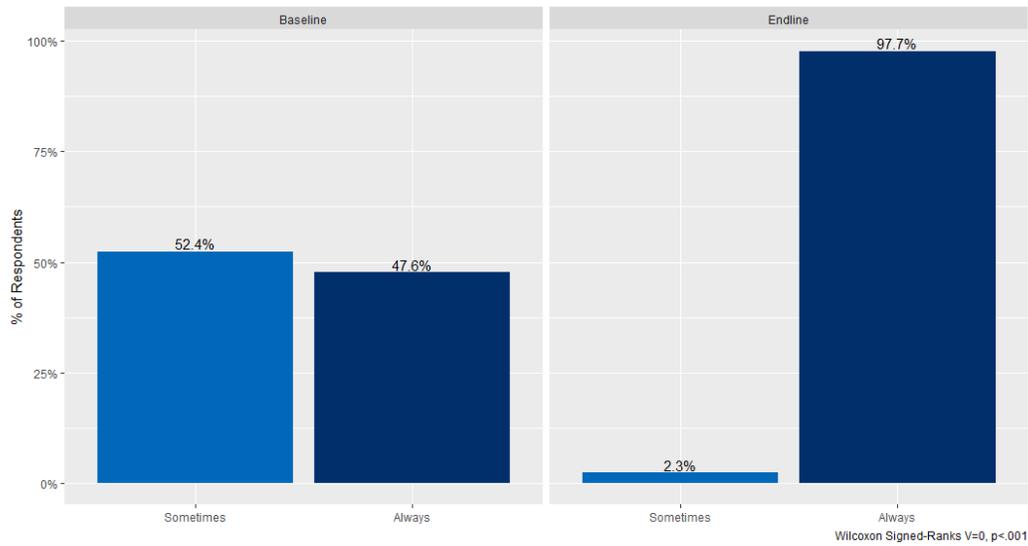
Reusable pads have not gained much acceptance as some women complain that they leak and therefore prefer the cup or disposable pads. – MHM champion, FGD, Endline

Additionally, more women reported having access to the materials they needed for managing their last menstrual period at endline (100 percent) than they did at baseline (93 percent). It is important to note that although a high percentage of women reported having access to the materials they needed at baseline (93 percent), this did not align with data collected through FGDs and KIIs. It is possible that at baseline, women considered their available materials effective in managing menstruation, even if the quality and adequacy of these materials was sorely lacking.

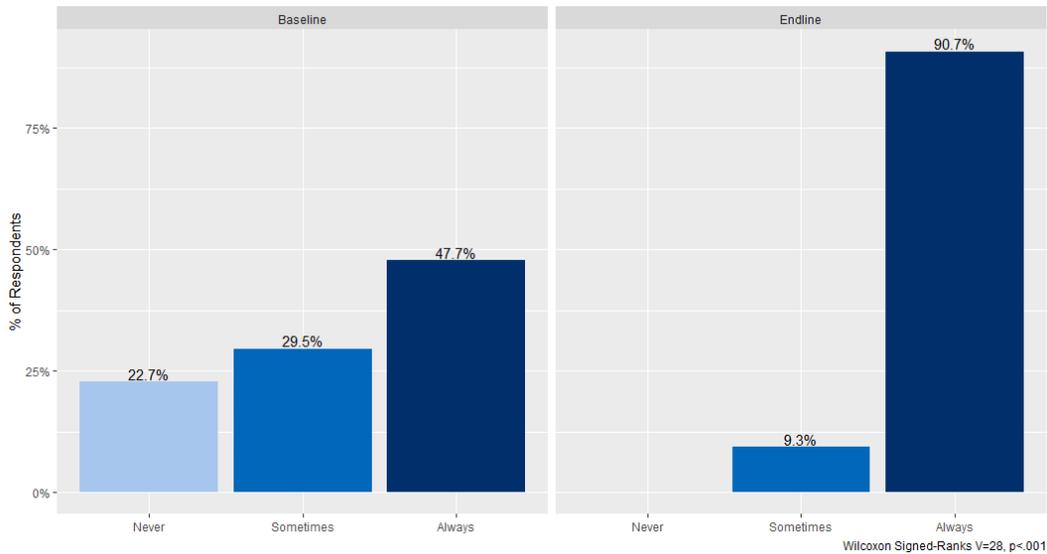
Another set of items in the women's questionnaire revealed the following:

- 98 percent of women “always” had enough menstrual materials to change them as often as they wanted to at endline, compared to 48 percent at baseline (Figure 3 | a).
- 91 percent of women “always” got more materials when they needed to at endline, compared to 48 percent at baseline (Figure 3 | b).
- 89 percent of women “never” worried about how they would get more menstrual materials at work if they ran out at endline, compared to 30 percent at baseline (Figure 3 | c).

a) Q: How often did you have enough of your menstrual products to change them as often as you wanted to at work? Would you say [graph categories]?



b) Q: How often did you get more menstrual products when you needed to at work? Would you say [graph categories]?



c) Q: How often did you worry about how you would get more menstrual products at work if you ran out? Would you say [graph categories]?

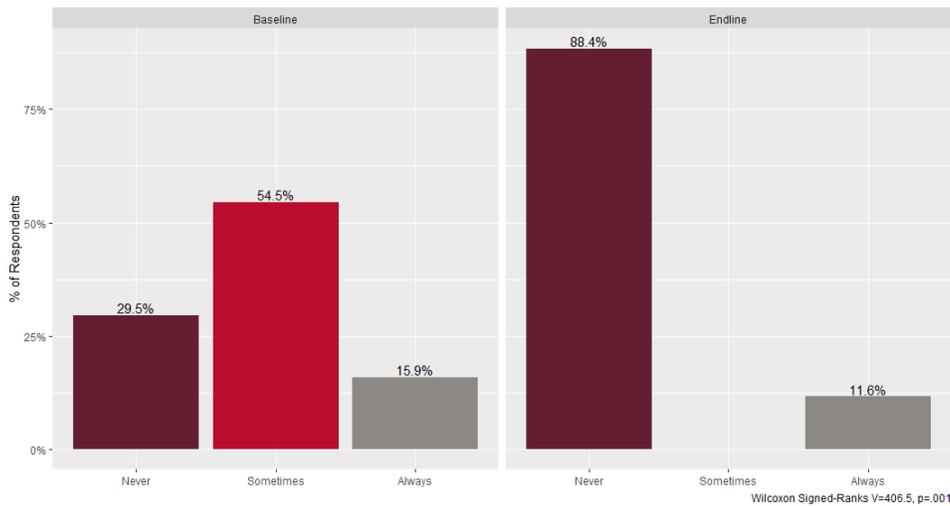


Figure 31. Changes between baseline and endline in women’s access to menstrual products and satisfaction with their menstrual materials

Finding 5: Reduced financial burden of purchasing menstrual products

Providing free menstrual products in the workplace reduced the financial burden of purchasing these products, which was a profound barrier for many menstruating employees in managing their menstruation at work. Even though all women employees reported in the baseline questionnaire that they used disposable menstrual products (see Table 12), women employees shared in baseline FGDs that menstrual products were expensive and financially burdensome to purchase, especially given these

women employees' low wages. Many women reported that they deprioritized purchasing menstrual products in light of other necessary household expenses. When they did purchase them, women reported only budgeting enough for themselves or their daughters; they found it difficult to lend extra disposable pads to colleagues who needed them.

Most of [the women employees] here live hand to mouth, hence cannot afford pads. It is even worse if one menstruates for more days [than expected]. – HR Manager, KII, Baseline

In endline FGDs, women reported that access to free menstrual products in the workplace reduced the financial burden of purchasing products to take to work and reduced the anxiety of navigating menstrual needs at work without enough products on hand. Data collected in women's endline questionnaires showed that more women reported "always" having the money to purchase menstrual products in the past five months at endline (90 percent) compared to baseline (64 percent). Moreover, women reported in endline FGDs that consistent access to free menstrual products in the workplace allowed menstruating employees to change products as often as needed, instead of rationing products and resorting to unsafe practices (see Finding 16: Reduced reliance on unsafe menstrual materials), such as using materials not intended for catching or absorbing menstrual blood.

Before [the intervention] we had to buy pads, yet the needs were many and sometimes the money would be so tight that it becomes difficult to afford pads. Women would be forced to miss work because all the money is spent and there is no money for pads. These days, even if you are broke and you don't have pads, you just come to work because you know you'll get pads at work. – Woman employee, FGD, Endline

The financial burden of purchasing menstrual products—often too expensive to purchase in local markets—and the resulting dependence on unsafe practices reportedly affected women's mental and emotional health at work, including psychosocial stress (see Finding 6: Increased access to menstrual products at work linked to reduced menstruation-related stress).

Finding 6: Increased access to menstrual products at work linked to reduced menstruation-related stress

For many menstruating employees at baseline, the lack of menstrual products was a significant stressor in the workplace, especially in cases where women's periods started unexpectedly at work, and they did not have products on hand. During baseline FGDs, many women employees expressed that they felt anxious about leakage and staining their work clothes. They stressed about finding an emergency disposable pad on site, and worried about the prospect of having to leave work to obtain a menstrual product. Leaving work to manage menstruation meant taking unpaid leave, which forced women to forego hourly wages. Additionally, they reported in baseline FGDs that they felt pressured to cover up the reason why they needed to miss work (i.e., if MHM-related) when speaking to their supervisor or manager, especially if it was related to menstruation.

Lack of pads can make you go home if you are not the kind to ask from others. You will [only] be paid for the amount of time that you have worked. – Woman employee, FGD, Baseline

In endline FGDs, women expressed feeling less anxious about what to do if their period started unexpectedly at work, compared to their level of anxiety at baseline. They attributed this change to the provision of menstrual products through the intervention. Having access to free menstrual products helped reduce women employees' absenteeism, as they no longer needed to leave work to find a spare

menstrual product. They cited during baseline that needing to ask for menstruation-related leave was a stressor; therefore, reduced need for menstruation-related leave at endline predictably contributed to lower stress levels.

Before the MHM project, women used to have anxiety if they started menstruating unexpectedly, but now they are more at ease because pads are available. We would sometimes use cut offs to manage such situations, but now we are grateful because we get emergency pads from the first aid provider. – Woman employee, FGD, Endline

If you come to work and you don't have pads, you ask the first aid provider. Before [the intervention], you would have to go home...so it has reduced absenteeism. – Woman employee, FGD, Endline

It is important to note that even with increased access to menstrual products and increased access to toilet facilities to change products (see Finding 8: Slight increase in freedom to use toilet facilities) at endline, some women reported in FGDs that they still worried about blood leaking through their menstrual products and staining their clothes. Even at endline, 21 percent of women still “sometimes” worried that blood would leak through to their outer garments. They attributed this to their inability to leave workstations to change menstrual products when necessary out of fear that their supervisor would find out and reprimand them for disrupting the production process. Endline findings at Company A and Company B differed; at Company B, employees remained worried about blood leaking and about supervisor reprimand, and at Company A, those fears were reduced. However, quantitative data from women’s questionnaires at Company B showed some improvement; more women “always” had enough time and opportunities to change their menstrual materials when they wanted to at endline (100 percent) than at baseline (69 percent).

4.3.3 ACCESS TO SAFE AND CLEAN FACILITIES THAT ARE EQUIPPED WITH SOAP AND WATER TO BATHE ONESELF AND CLEAN OR DISPOSE OF MATERIALS

Finding 7: Improved sanitation and hygiene outcomes and increased value in female-friendly toilets

At baseline, the infrastructure assessment and FGDs with women employees revealed that the quality of toilet facilities at Company B was inadequate. Toilet facilities did not have consistent availability of soap, and if it was available to employees, it was often diluted with water. Women reported feeling uncomfortable with the lack of female-friendly infrastructure and the absence of crucial sanitation resources which prevented them from cleaning themselves after changing menstrual products in toilets.

The intervention, in partnership with management at Company B, introduced small-scale infrastructural improvements to make toilets more female-friendly. In the women’s questionnaire at endline, 95 percent of women employees reported that they found improvements in toilet facilities to be “very helpful.” Toilet facilities were cleaner at endline than at baseline and had a more reliable supply of soap, which may have contributed to women employees’ improved hand hygiene. Infrastructural improvements like the addition of hooks, shelves, and taps inside cubicles were helpful, and the addition of taps provided women employees the option to privately wash their reusable menstrual products at work, according to endline women’s questionnaires and KIIs with supervisors and as noted in Finding 4: Improved access to a variety of menstrual products. Managers and supervisors mentioned in endline FGDs and KIIs that they came to understand the value and importance of MHM-friendly infrastructure over the course of the intervention. At endline, management committed to improving toilet

infrastructure in the future. A new expansion site is being construction and Company B agreed to increase the number of toilets available to women employees in the new space. However, in contrast to Company A, which provided more toilet paper after the infrastructure assessment, Company B respondents reported that sufficient toilet paper was still not available at endline.

We don't have many issues like we had in the past such as phones dropping in the toilet since there was no place to put the phone, disposal bins that are full, now you put your phone on the shelf [when changing menstrual pads], and you don't get stressed. – Supervisor, FGD, Endline

Finding 8: Slight increase in freedom to use toilet facilities

At baseline, employees shared that they were not able to use toilets whenever they wanted to. Employees on the factory floor were not allowed to use toilets during certain times of the day (particularly the morning and lunch time) to accommodate cleaning schedules. Additionally, employees' strict work schedules and high production demands prevented women employees from leaving their workstations and taking breaks to manage their MHM-related needs, as reported in several FGDs and KIIs at baseline. A male supervisor shared in his KII that gate pass policies were important to regulate the use of toilets while ensuring that employees met their targets. For context, gate passes allow employees to leave the building during working hours for personal reasons, including to access toilets. Employees need a note from the first aid provider to access toilets during restricted hours and a card (issued based on the number of available toilet stalls) to go during regular hours. Restrictions on when menstruating employees could use toilets limited women's ability to maintain adequate menstrual health and hygiene. These specific restrictions on toilet access were not reported at Company A.

Security is tight, so sometimes I have to talk to the guard or write a note requesting the guard to allow someone to access the toilets during restricted hours. This happens a lot when a woman is on her period. – First aid provider, KII, Baseline

In contrast, at endline, menstruating employees were able to use toilets more frequently, which helped them manage their menstrual needs. All women employees at endline reported “always” having enough time and opportunities (such as breaks) to change their menstrual products when they wanted to, which was an increase from 69 percent of women who reported this statistic at baseline. Fewer women never had time at endline (0 percent) than at baseline (5 percent). Some women reported in endline FGDs that they preferred to ask the female guard for toilet access during restricted hours to meet their menstrual needs, instead of seeking permission from the guard, who was a man. Toilets were less restricted at endline than at baseline, as there were only two cleaning breaks at endline during which employees could not use toilets. However, men employees reported in endline FGDs that the cleaning schedule continued to hinder employee access to toilets.

Finding 9: Insufficient toilet-to-employee ratio and limited toilet supplies

Aside from installing a tap in each toilet stall for private washing, Company B did not implement any of the large-scale infrastructure upgrades recommended by the activity to improve the experiences of menstruating employees between baseline and endline. Many employees noted in FGDs and KIIs at both baseline and endline that there were insufficient toilet facilities for menstruating employees. At baseline, only three toilet stalls existed to serve more than 200 women, of which only two met the standards of being fully functional. The UNICEF/WHO standard for the ratio of women to toilets is 25:1 (Adams et al., 2009), but at Company B, the baseline infrastructure assessment revealed that the ratio of women

employees to functioning toilets was 103:1. In comparison, the woman-to-toilet ratio at Company A was 6:1 at baseline.

At endline, only one of the toilets accessible to women on the factory floor at Company B was fully functional. The endline infrastructure assessment revealed that the ratio of women employees to functioning toilets was 56:1, though this more favorable ratio was in large part due to considerable reductions in the number of women employees at Company B when endline data were collected. Although the quality of toilets improved at endline (see Finding 8: Slight increase in freedom to use toilet facilities), the absolute number of functioning toilets did not increase. In a KII at endline, a manager shared that Company B was opening up a new site in the future at which they planned to build 17 female-friendly toilet compartments for women; therefore, they deprioritized large-scale infrastructural upgrades at the current site. In an endline KII, the CEO of Company B recognized that toilets did not adequately support the needs of menstruating employees.

We don't have enough toilets for the women, and the toilets we have are also not up to standard. – CEO, KII, Endline

Moreover, the baseline and endline infrastructure assessments revealed lack of privacy in the toilets. The inside of the women's toilet facility was visible from the outside for anyone, including both men and women, who walked past the shared entrance to access handwashing sinks. This visibility also compromised the safety and comfort of employees who used women's toilet facilities. The baseline infrastructure assessment at Company A revealed the need to increase privacy in one toilet facility. The company invested in this large-scale upgrade, which was noted by Company A endline respondents as beneficial. These relative upgrades and outcomes were not reported at Company B.

In FGDs at baseline, several women employees reported that toilet paper was not available in toilet facilities, which impacted their ability to manage menstruation hygienically. At times, guards distributed limited amounts of toilet paper to employees when needed, and employees were advised to bring their own toilet paper from home. The HR manager acknowledged the importance of toilet paper in a baseline KII; however, the company considered it too costly a provision to sustain. At endline, toilet paper was still not available on site. Employees used scrap cut pieces of cloth in place of toilet paper, approached the guard or the first aid provider for spare pieces of toilet paper, or purchased and carried their own toilet paper to work.

4.3.4 SUPPORTIVE ENVIRONMENT IN THE WORKPLACE THAT ALLOWS WOMEN TO MANAGE THEIR MENSTRUATION WITHOUT FEAR OF STIGMA OR EMBARRASSMENT

Finding 10: Greater discussion of menstruation (i.e., breaking the culture of silence of menstruation) suggests potential reduction in menstruation-related stigma in the workplace

Many employees and key workplace influencers reported at baseline a culture of silence and women's forbearance around menstruation at work, which contributed to an unsupportive work environment for menstruating employees. Women employees reported in baseline FGDs that they did not openly discuss their menstrual experiences with colleagues, supervisors, managers, and others in the workplace, in hopes of keeping their menstruation a secret. They also reported that they were secretive about their menstrual needs at work out of fear of menstrual stigma, gossip about their bloodstains (particularly among men employees), and concern about colleagues finding out their menstrual status. In baseline FGDs, women and men employees commented that it was embarrassing or shameful for a menstruating

employee's menstrual blood to leak through her menstrual products and stain her outer garments. Also, in baseline FGDs, men employees expressed that secrecy and silence around menstruation prevented them from learning about ways to support women's MHM-related needs. Some men mentioned they had wanted to inform their menstruating colleague of a leak or stain, but they felt that it was shameful and too intrusive to do so. Women employees reported feeling comfortable providing support to menstruating employees who had stained their outfits with blood by offering a *leso* (scarf) to tie around their waist, acquiring a spare pad on their behalf, or finding a gate pass for them to leave work. Several women employees reported in baseline FGDs that they did not feel the need to talk about menstruation in the workplace because it was a personal issue and was supposed to be their problem. Similarly, women reported feeling that they needed to bear or persevere through menstruation-related discomfort, pain, and unmet needs silently.

I sit in front of a man, and when I am on my period, I fear that I may leak, and he may see it when I stand. If men see such a thing, they can discuss with other colleagues. – Woman employee, FGD, Baseline

You don't need to tell people [about menstruation] because it is a personal issue, and it is supposed to be your problem. – Woman employee, FGD, Baseline

*Sometimes someone leaks when they are on the line, and I have to go look for a *leso* [scarf] for them before they can go to the toilet to deal with the leak. – First aid provider, KII, Baseline*

The pressure to persevere through menstruation-related issues in the workplace evolved over the course of the intervention. At baseline, women used the Kiswahili word “*kuvumilia*” (meaning “to endure” in English) to express a sense of victimhood and a pressure to bear their discomfort. At endline, however, women used more effort-focused language such as “*kujikaza*” and “*kung'ang'ana*” (meaning “straining” and “struggling through [a difficult circumstance],” respectively). This illustrated how women seemed to reinterpret their perseverance in a more resilient light at the end of the intervention period.

In addition, women reported feeling more comfortable and confident discussing their menstrual experiences in the workplace at endline. In endline FGDs, more women reported that they approached key workplace influencers like the MHM champion and worker relations representatives to seek MHM-related support (see Finding 11: Improved menstruation-related support from key workplace influencers).

It is possible that the intervention's efforts to normalize menstruation, especially in education and sensitization sessions that targeted key workplace influencers, could have contributed to some improvements in countering the culture of silence around menstruation at Company B. However, for some menstruating employees, the culture of silence and secrecy around menstruation remained at endline. At Company B, the intervention did not adequately address men and women employees' misconceptions about menstruation (i.e., see Finding 1 above about the intervention's light-touch engagement), which often drive menstrual stigma. More targeted and direct efforts may be needed to address menstrual stigma and break the culture of silence around menstruation in contexts such as this.

Finding 11: Improved menstruation-related support from key workplace influencers

The intervention contributed to Company B's working environment by improving the capacity of key workplace influencers, such as the first aid provider (as noted previously), to better support the needs

of menstruating employees. At baseline, the first aid provider shared in a KII that she provided basic first aid support, emergency menstrual pads if she had any on hand, and painkillers to employees. However, she could not officially administer medicines because she was not trained as a health professional. Although the first aid provider supported menstruating employees at a rudimentary level, she reported feeling underutilized because women employees weren't aware of the assistance she provided and because older women employees considered her to be too young and uninformed to approach with questions about menstruation. Moreover, the first aid provider reported that she was not provided enough medicines by the company to support employees, resulting in her having to purchase them herself. Company A employed a nurse with more skilled medical training than Company B's first aid provider, but women employees at this company reported a discomfort in approaching the nurse about menstruation at baseline.

In baseline FGDs, a few women employees reported that they occasionally approached worker relations representatives to discuss MHM-related concerns, though they worried that these representatives might report these discussions as personal issues. Such distrust might have stemmed from a belief that worker relations representatives, who were appointed by management, would share confidential employee information with management. In a baseline KII, worker relations representatives shared that they supported menstruating employees by providing emergency pads when available and requested gate passes on their behalf.

The intervention strengthened the first aid provider's, worker relations representatives', and MHM champions' (who were established as part of the intervention) abilities to support menstruating employees. Before the intervention, these key workplace influencers were unofficial sources of support for menstruating employees, but they did not feel adequately equipped to address employees' concerns about menstruation. At endline, key workplace influencers reported in KIIs that they were able to better advocate for employees' MHM-related needs, provide basic information about managing menstruation at work, and serve as approachable resources for employees.

Before [the intervention] they [menstruating employees] only came to me for medication but now they know me more, and they talk to me about how to use different products. They have become more friendly toward me as a result of this project, and they are more comfortable to talk to me since the project started. – First aid provider, KII, Endline

We have more capacity to solve the MHM issues presented to us. If someone has an MHM-related challenge and they approach us, we solve it. Before the project, we were only able to facilitate for them to get a gate pass to go home, but now we have mechanisms to support them and we enjoy seeing them get better support. – Worker relations representative, FGD, Endline

Finding 12: Reduced menstruation-related psychosocial stress in the workplace due to greater social support

In baseline FGDs, women reported that the pressures of their jobs were an ever-existing source of anxiety, so managing unmet MHM-related needs amplified their stress levels. The need to justify menstruation-related effects on work performance was reported as a constant source of anxiety for women. However, in endline FGDs, women shared that access to menstrual products and increased social support in the workplace eased some of their stress. According to women's questionnaires, more women "strongly disagreed" that the stresses of their job were much harder to handle because of their menstrual period at endline (21 percent) than at baseline (7 percent); concurrently, fewer women

“agreed” that these stresses were harder to handle at endline (5 percent) than at baseline (21 percent). Women reported feeling less alone in dealing with their menstruation-related concerns and felt more encouraged to seek MHM-related support. Key workplace influencers, such as worker relations representatives and MHM champions, noted in their endline KIIs that more women employees approached them for support with their MHM-related needs since the start of the intervention, compared to before the intervention. Knowing that they could turn to colleagues in the workplace for support alleviated some women’s menstruation-related stress, as reported in endline FGDs.

The support [from the intervention] makes you feel that there is someone to help you, that you are not alone – you can tell a colleague and you will find support. It creates less stress to know that you can get help. – Woman employee, FGD, Endline

Finding 13: Increased understanding of menstruation-related needs by men and women supervisors and management

At baseline, supervisors’ and managers’ responses in KIIs exhibited limited understanding of employees’ menstruation-related needs, concerns, and issues. They were largely unaware—and, at times, even dismissive—of menstruating employees’ struggles in the workplace, due to a strong culture of silence around menstruation. In FGDs, women supervisors reported that women employees occasionally approached them to discuss menstruation-related concerns because of their shared identities as women. However, managers, worker representatives, mentors, and women supervisors agreed in their FGDs and KIIs that it was important for them to gain knowledge on menstruation in order to provide a more supportive environment for women employees.

Supervisors are serious about work but not serious about understanding personal problems. They can dismiss you and tell you that is a personal problem and none of their business. – Woman employee, FGD, Baseline

Following baseline research, supervisors and managers participated in sensitization sessions to better understand how MHM affected employees in the workplace. At endline, there was greater recognition from management-level personnel that MHM was an issue that affected their employees than there was at baseline. Supervisors and managers reported in endline FGDs and KIIs that they found it important to understand menstruation so that they could provide better MHM support and guidance to women. Additionally, in an endline FGD, a supervisor acknowledged that supervisors needed continual training on MHM and on managing people in order to become better in their roles.

I understand and view menstruation as normal and encourage other employees to be open. – Supervisor, FGD, Endline

Supervisors should be trained on menstruation, to know how to respond to MHM needs and increase our confidence in dealing with MHM issues. – Supervisor, FGD, Endline

Additionally, according to supervisors’ and managers’ responses in endline FGDs and KIIs (respectively), they placed greater importance on understanding how employees’ menstrual experiences impacted them in the workplace and were more inclined to provide temporary duty adjustments for menstruating employees. More supervisors were willing to discuss employees’ menstruation-related needs in the workplace at endline, compared to baseline.

We now handle [menstruating employees] better because we now know how to handle them. Before I would tell them, ‘Get away from me, what do you want me to do about your period?’

Why didn't you plan yourself? But now we are more understanding. – Supervisor, FGD, Endline

Finding 14: Slightly improved supervisor treatment of menstruating employees in a target-driven environment

At baseline, many employees shared in FGDs and KIIs that the target- and productivity-driven workplace culture at Company B negatively impacted menstruating employees by deprioritizing employee wellbeing. Many women employees reported in baseline FGDs that they felt pressured to meet production targets, even if menstruation affected their comfort while working. The pressure to meet production targets, the fear of underperforming and being reprimanded by supervisors or managers, and the double burden of menstruating at work and needing to meet targets often pushed women employees to quietly tolerate menstrual discomfort and compromise their own wellbeing. Some women employees reported in baseline FGDs that they opted to miss work while menstruating, even if it meant taking unpaid leave. They also reported feeling like supervisors did not support their MHM-related needs; in some cases at baseline, supervisors in FGDs and managers in KIIs communicated limited sympathy for menstruating employees' challenges.

No support is offered. Here, you support yourself. You have to be confident [when you are] absent and deal with it. – Woman employee, FGD, Baseline

Supervisors are serious about work but not serious about understanding personal problems. They can dismiss you and tell you that is a personal problem and none of their business. – Woman employee, FGD, Baseline

We should not know a woman's secret because it will bring shame to her and affect production. – Production Manager, KII, Baseline

Production lines at Company B were structured as assembly lines; at Company A, production targets were managed by department. Any interruptions or delays in the production line at Company B—such as breaks to use the toilet or slower productivity due to menstrual pain—were often met with harsh treatment of the employee (e.g., yelling) by their supervisor because these delays led to interruptions in the entire production line's workflow. In baseline FGDs, there were numerous reports by women employees of supervisors shouting at them on the factory floor. Additionally, several workplace policies discussed in FGDs and KIIs at baseline illustrated supervisors' and managers' lack of trust in employees. For example, in his baseline KII, the production manager noted that gate pass cards were instituted to ensure that workers wouldn't "overstay" in the toilets.

In FGDs at endline, women employees reported fewer instances of supervisors shouting at them while they were working, which reportedly contributed to their improved job satisfaction. In endline FGDs and KIIs, supervisors reported an increased understanding of menstruating employees' experiences, a reduction in their own harsh treatment of workers in their production line, and an increase in their willingness to discuss employees' menstruation-related needs in the workplace. According to women's questionnaires at endline, the relationship between menstruating employees and their supervisors improved, compared to baseline. More women felt that their supervisors or managers responded respectfully "to a large extent" when they brought up an MHM-related issue or asked them an MHM-related question at endline (57 percent) compared to baseline (41 percent). Their men colleagues concurred to a degree; more men thought that supervisors responded respectfully "to some extent" when women employees raised MHM-related issues at endline (23 percent) compared to baseline (18

percent). However, fewer men felt they did so “to a large extent” at endline (64 percent) than at baseline (70 percent), possibly because they had become less confident in their workplace’s MHM-friendliness after being exposed to the intervention.

Supervisors feel good because they are answerable for production and targets, and when women are comfortable, the targets are met and supervisors feel happy and proud. – Supervisor, FGD, Endline

Despite the above improvements, endline data suggested the need for further progress. Women reported in endline FGDs that they still had no choice but to finish difficult tasks and meet targets, regardless of whether they experienced menstruation-related barriers during shifts. Also, in their endline FGDs, some supervisors continued to prioritize meeting production targets over considering employees’ needs. Men and women employees shared in endline FGDs that supervisors continued to behave harshly, especially toward menstruating employees who used the toilet frequently.

It is purely professional. We are here for work. We must meet targets. – Supervisor, FGD, Endline

Frequent movement to the toilet makes the supervisors angry. – Man employee, FGD, Endline

Some supervisors are so harsh; they can even follow a woman to the toilet. I think they don’t trust the employees. – First aid provider, KII, Endline

At times, the timid nature of the women is the reason supervisors shouted at them since they were not sure if the women were paying attention to what the supervisor was saying. – Production manager, KII, Endline

Finding 15: Greater willingness among menstruating employees to ask for menstruation-related leave

At baseline, women employees reported in FGDs that leaving the workplace to manage menstruation-related concerns would require them to take unpaid leave. Many women employees reported in baseline FGDs that they did not feel like they could ask their supervisors—especially male supervisors whom they perceived to be less empathetic than their women counterparts toward MHM-related issues—for menstrual leave. At endline, however, women shared in FGDs that they were more likely to request partial-day rest at the first aid provider’s station or full-day leave for MHM-related reasons. However, they preferred to ask the first aid provider, MHM champions, and worker relations representatives to seek permission from managers and supervisors on their behalf. This comfort to seek menstruation-related leave and support via workplace influencers as opposed to speaking to supervisors directly was supported by data collected from women’s questionnaires: there were minimal changes between baseline and endline in women’s comfort level with telling their supervisors that they needed to leave work for menstruation-related reasons. In endline FGDs, several women and men mentioned Company B’s unpaid leave policy as a continued source of psychosocial stress for menstruating employees. Several women expressed feeling stressed at work, knowing that they had to bear menstruation-related pain and discomfort at work due to a lack of paid leave options. Additionally, even with access to menstrual products, some women reported in endline FGDs that they felt scared of leaking blood and staining their outer garments.

Women are at times in pain, yet they can’t be given leave. – Man employee, FGD, Endline

You have to be stressed because if you have a pad and it's full, and you're in the middle of stitching, you will lose time if you go to the toilet, since you will find backlog. You will put a halt to production so you feel anxious about the possibility of leaking. – Woman employee, FGD, Endline

In his endline KII, the HR manager reported that the company offered paid leave to a select group of women employees who reported extremely painful menstrual cycles. This was not reported at Company A. At endline, managers and leaders exhibited in their KIIs greater recognition of the fact that unpaid leave was a barrier to women employees managing their menstruation-related needs adequately. The intervention's sensitization sessions might have contributed to managers' and leaders' development of greater empathy for menstruating employees and increased knowledge about their needs.

However, it is important to note there were no formal or company-wide efforts to reconsider unpaid leave policies for menstruating employees at endline, even though this was recommended by the intervention's policy analysis recommendations. Most employees at Company B were on contract and their pay was dependent on the total amount of time they worked each month, unlike permanent employees (i.e., managers and leaders) who were paid a fixed wage each month. Therefore, if employees at Company B opted for leave, they would forego hourly or daily wages.

When [women] leave work due to menstrual pain, they get unpaid time off because they are on contract, and they are not permanent employees. – Manager, KII, Endline

4.3.5 IMPROVED MHM PRACTICES IN THE WORKPLACE

Finding 16: Reduced reliance on unsafe menstrual materials

Many women also reported in baseline FGDs that they did not have safe and hygienic menstrual products on hand if they started menstruating at work, which left them few choices to manage their cycle while remaining at work: they could use low-quality disposable pads, wear a disposable pad for longer than recommended, or use scrap pieces of cut cloth from the factory (which often had staples, rough edges, and irritating dyes) to absorb their menstrual blood. During a baseline KII, the factory manager reported that women experienced menstrual health complications, like vaginal infections, linked to their use of cloth to absorb menstrual blood.

She may get periods unexpectedly and doesn't have pads, so she picks a cloth and uses it. – Worker relations representative, KII, Baseline

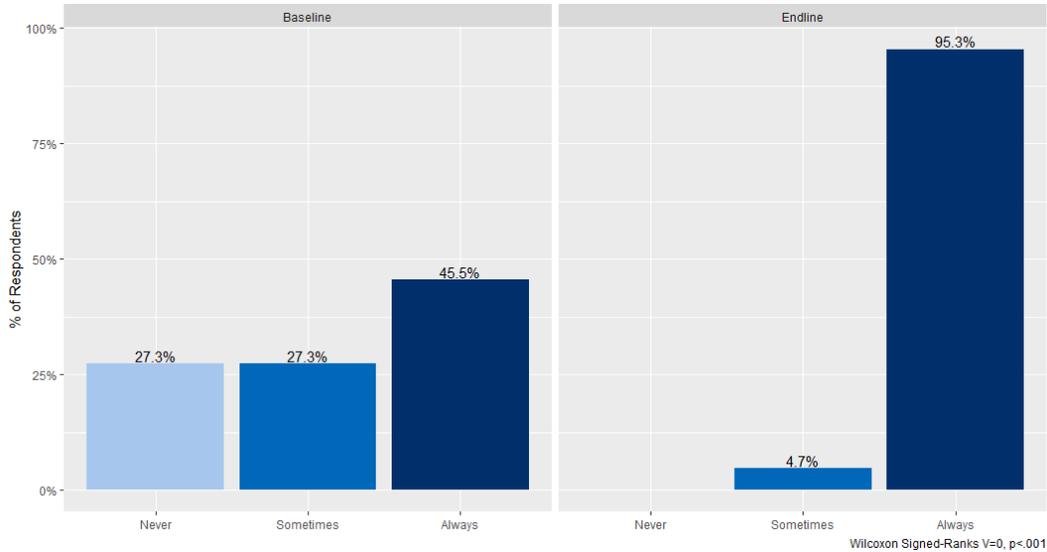
Reliable access to quality disposable products at work reportedly reduced women's dependence on low-quality disposable pads and scrap pieces of cut cloth. Additionally, women employees reported in FGDs fewer vaginal infections at endline, which they attributed to cleaner toilets, reduced use of scrap cut pieces of cloth, and having enough pads to change frequently.

When [women employees] were not getting pads, they used to use cut offs [cut pieces of cloth] and they used to complain about infections because of the preservatives used in the fabric... They were exposed to the chemicals. With the supply of [menstrual] products, infections have now reduced. – Manager, KII, Endline

At baseline, employees' reliance on unclean and unsafe menstrual products contributed to their discomfort and dissatisfaction with their products in the workplace. At endline, after having greater

access to clean and safe menstrual products, women reported less discomfort with their menstrual products and less dissatisfaction with their products' cleanliness compared to baseline (Figure 32).

a) Q: How often did you feel that your menstrual products were comfortable at work? Would you say [graph categories]?



b) Q: How often were you satisfied with the cleanliness of your menstrual products at work? Would you say [graph categories]?

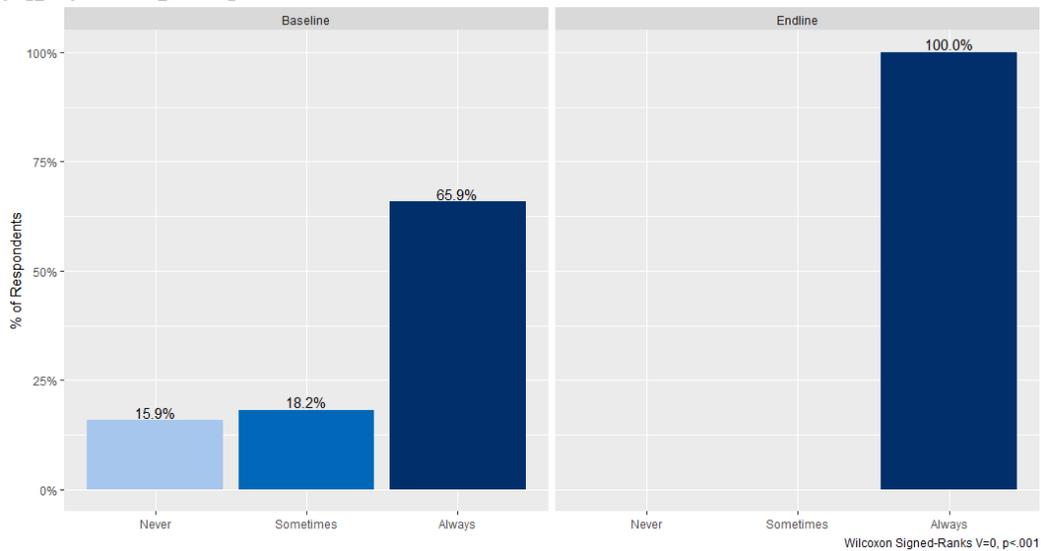


Figure 32. Changes between baseline and endline in women’s comfort and satisfaction with their menstrual products

Finding 17: Improved disposal practices

According to the women’s questionnaire at endline, 100 percent of women reportedly disposed of used menstrual products in a bin in the latrine at endline as compared to 89 percent of women at baseline. Menstrual waste bins were present at baseline and endline, and they were emptied twice per month, per Company B’s waste disposal contract. Upon the recommendation of the activity, Company A increased

the frequency of emptying menstrual waste bins from two to four times per month; Company B did not. Compared to baseline, fewer women at endline used menstrual waste disposal options like the toilet, community rubbish, burning, and transporting home, as shown in Figure 33.

Q: Where did you most often dispose of your used menstrual products?

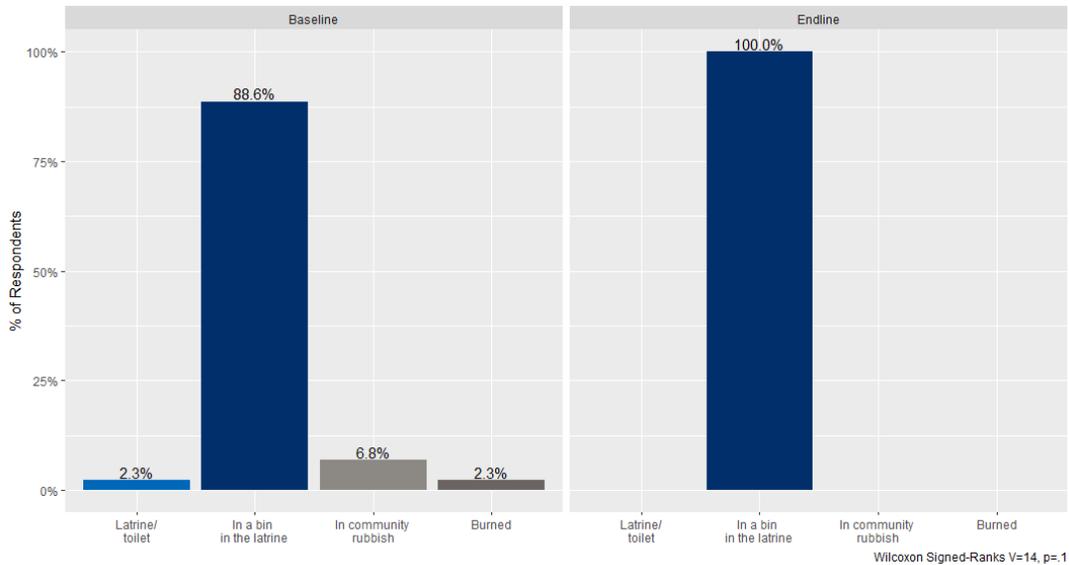


Figure 33. Changes between baseline and endline in the location where women employees most often disposed of their used menstrual materials

At baseline, several managers and employees reported in FGDs and KIIs that some women used scrap pieces of cloth to absorb menstrual blood and disposed of these pieces by flushing them down the toilet. These cloth pieces obstructed the factory’s solid waste management system and necessitated costly repairs. At endline, no solid waste system blockages were reported, likely due to the posters demonstrating proper menstrual waste disposal. These posters also improved cleaners’ job satisfaction. At endline, the cleaner reported feeling more respected than at baseline because employees effectively followed menstrual product disposal protocols.

I wanted to quit my work because women would dispose their pads anyhow, and I felt very disrespected. Sometimes I would go to the first aid provider for gloves and use pieces of cloth to pick up pads, but since the intervention, I don’t find pads that are improperly disposed because women have been taught how to dispose properly and because of the posters. – Cleaner, KII, Endline

Disposal has improved because of the posters and new employees are able to learn how to dispose [of used menstrual products]. – Supervisor, FGD, Endline

4.3.6 IMPACTS ON WOMEN EMPLOYEES AND EMPLOYERS

Finding 18: Reduced absenteeism and presenteeism among menstruating employees

At baseline, a number of menstruation-related issues contributed to partial-day and overall absenteeism, including menstrual product access, pain management, and the desire among some to manage menstruation in a private setting. Women employees reported in FGDs that they sometimes missed

work to manage menstruation-related concerns like extremely painful cramps; those who lived far from the workplace were more likely to stay home for the rest of the day and manage their menstrual pain instead of taking a break for a few hours. Moreover, some women did not have disposable pads available while menstruating and opted to stay home rather than accidentally leak menstrual blood and stain their clothes at work. Men employees shared in baseline FGDs that supervisors interpreted menstruating employees' absenteeism as an attempt to sabotage production targets, therefore driving them (supervisors) to reprimand absent employees. It was common knowledge among baseline FGD and KII participants that women did not cite "menstruation" as the reason for requesting leave. Instead, they cited general illnesses or domestic concerns. However, one woman employee in a baseline FGD shared that women who requested leave for "general illness" were asked to produce a doctor's note as proof, and if they could not, they would be suspended without pay. This consequence was not reported at Company A.

If a woman calls that day and says she is not able to come to work, she is in trouble unless she comes with a doctor's note. The supervisor will think you are trying to sabotage his targets. It is safer to come in and then request for leave. – Man employee, FGD, Baseline

When you are absent from work, you cannot say that you missed work because you were on your period, you can't say that you were sleeping, so you have to find a convincing reason, which can be a challenge. It is also difficult to tell the HR [Manager], because he is a man, so you just say that you were not feeling well. He may request for a doctor's note or suspend you for two days if you don't produce one. Sometimes you have to go to a health facility and pay 200 KSH [approximately 2 USD] to get a doctor's note. Even when you have the doctor's note you will be marked as absent and you will not be paid for the day of work that is missed. – Woman employee, FGD, Baseline

In contrast, in endline FGDs, women and men reported that having access to menstrual products and pain management resources on site reduced menstruating employees' whole-day and partial-day absenteeism. According to women's questionnaires at endline, 61 percent of women thought that the intervention had positively affected their attendance. Women shared in endline FGDs that they felt less inclined to leave work to find a pad when they started their period because they had consistent access to products on site, adding that having access to menstrual products at work motivated them to put in the effort to continue working instead of taking leave while menstruating. As detailed in Table 13, there was a statistically significant reduction in mean days ($t=2.35$, $p=0.02$) and less significant reduction in mean hours ($t=1.69$, $p=0.09$) missed due to menstruation-related reasons per woman between baseline and endline. Given that most of Company B's employees were women, reductions in absenteeism for most employees had the potential to be impactful for the company. In endline KIIs and FGDs, managers and supervisors also observed lower rates of absenteeism among menstruating employees, which they too attributed to employees' increased access to menstrual products and a more supportive workplace environment. Supervisors and managers reported in endline FGDs and KIIs that women seemed more honest at endline, compared to baseline, about needing to take time off due to menstruation-related reasons.

We have reduced cases of absenteeism compared to before the project started. – Supervisor, FGD, Endline

There isn't much absenteeism or leaving work to go home because of periods since the first aid provider provides pads. – Supervisor, FGD, Endline

They enjoy the support because now the women can make effort (kujikaza) to work while menstruating instead of being absent from work. – Worker relations representative, FGD, Endline

In addition to recognizing changes in absenteeism before and after the intervention, endline data also revealed changes in presenteeism. Presenteeism denotes employees’ performance while at work: increased presenteeism equates with diminished performance, while reduced presenteeism is a marker of improved performance. Data collected from the women’s questionnaire revealed a statistically significant improvement (i.e., decrease) in presenteeism ($t=-4.68$, $p=.000$) from baseline, where the mean presenteeism score⁷ was 9.6, compared to endline, where the mean presenteeism score was 6.2. The decrease in scores from baseline to endline indicated that women worked more efficiently while at work after experiencing the *MHM in the Workplace* intervention. Several indicators of employees’ self-reported performance are discussed in Finding 19: Greater confidence in work performance among menstruating employees.

Table 13. Changes between baseline and endline in women employees’ absenteeism

	BASELINE	ENDLINE	T STATISTIC	P VALUE
Mean days missed by women employees due to menstruation-related reasons, per woman	0.3 days	0.1 days	2.4	0.02
Mean hours missed by women employees due to menstruation-related reasons, per woman	0.6 hours	0.1 hours	1.7	0.09
Percentage of women who missed part of a workday due to menstruation-related reasons	15.9%	2.2%	2.2	0.03

Finding 19: Greater confidence in work performance among menstruating employees

At baseline, women employees shared in FGDs that the physical impacts of menstruation affected their work performance and had implications for production at the factory. They expressed that low motivation, menstrual discomfort, menstruation-related absenteeism, fear of leaking through their menstrual products, fear of being reprimanded by their supervisors, and needing to take a break in the first aid room affected their productivity while menstruating. This posed a challenge for the company because employees who were absent or taking a break would need to be replaced to ensure continued functioning of production lines. Sometimes a replacement employee might not be trained for the assigned task, or a replacement might not be available at all, which would hinder production targets. In his baseline KII, the HR manager mentioned that he had noticed a few cases of low productivity among menstruating employees. However, the factory manager, production manager, and some women employees reported in KIIs and FGDs, also at baseline, that menstruation did not affect one’s productivity, as employees had to meet strict targets.

Your situation does not matter; you must produce. – Woman employee, FGD, Baseline

⁷ The research team used the Stanford Presenteeism Scale 6 (SPS-6) to assess changes in workplace presenteeism based on data collected from the women’s questionnaire. The team created a summative score in which each question was assigned a value from 0-4, with 4 being the most positive.

Some [women] are not comfortable [while menstruating] and it affects production. She will go out frequently or ask for a gate pass to go out and finding a replacement can be a challenge. – Woman supervisor, FGD, Baseline

Productivity: It is not affected by menstruation because she has to sort her issues and deliver. – Production manager, KII, Baseline

At endline, production lines were reportedly more efficient during the intervention because lower menstruation-related absenteeism resulted in greater continuity and reduced need to rearrange employees on the line, according to the production manager in a KII. In endline FGDs and KIIs, supervisors and managers reported that women employees were more productive and efficient after experiencing the intervention, than they were at baseline. Supervisors reported that production targets were more efficiently met at endline than at baseline, and they concluded that this improvement was partly attributable to menstruating employees feeling more comfortable at work. Overall, supervisors exhibited a more positive attitude toward MHM in the workplace after observing its positive contributions to business outcomes. Additionally, the HR manager reported in an endline KII that the HR team was able to develop more accurate staff plans (i.e., the allocation of employees to various production lines) at endline than at baseline, as fewer employees were absent due to menstruation-related reasons. Data from women's questionnaires at endline illustrated that women's self-efficacy increased between baseline and endline, as shown in Figure 34. More women would rate their quality of work while on their period as above average at endline (30 percent) than at baseline (14 percent) and fewer women (39 percent) rated their work as just average at endline than baseline (48 percent).

Supervisors feel good because they are answerable for production and targets, and when women are comfortable, the targets are met and supervisors feel happy and proud. – Supervisor, FGD, Endline

Production is not affected (it continues as normal) because sometimes I send someone pads at their work station or help them get a lesa [large piece of cloth to wrap around the waste]. – First aid provider, KII, Endline

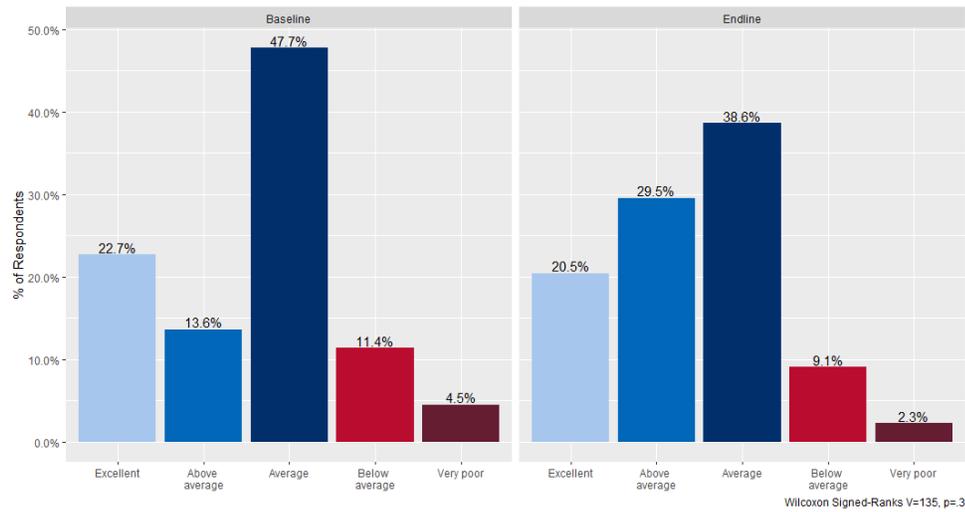
I would rearrange the lines up to six times in a day [before the intervention], meaning six women would be absent. Now, I am only doing it once a week and it is not every week. – Production manager, KII, Endline

Interestingly, in endline FGDs, men employees did not report observing changes in productivity because most employees didn't know when someone was menstruating. This was corroborated by a few women's responses in endline FGDs and women's questionnaires who said that even if menstruation or unmet MHM needs affected their work performance, women still needed to continue working and meet targets. Data collected through women's questionnaires showed that women employees perceived that their performance and productivity had improved between baseline and endline. An increase in the mean summative scores measuring women employees' self-efficacy was statistically significantly from 6.7 at baseline to 7.4 at endline ($t=-2.6$, $p=0.0098$), evidence that women's perception of the quality of their work while menstruating and their confidence to meet personal production targets on time while menstruating increased from baseline to endline. More women "strongly agreed" that they were able to finish hard tasks at work despite having their period at endline (53 percent) compared to baseline (14 percent), "strongly disagreed" that their period distracted them from taking pleasure in their work at endline (25 percent) compared to baseline (9 percent), "strongly agreed" that they were able to focus

on achieving their goals despite their period at endline (66 percent) compared to baseline (25 percent), “strongly disagreed” that they felt hopeless about finishing certain tasks at work due to their period at endline (34 percent) compared to baseline (7 percent), and “strongly agreed” that they felt energetic enough to complete all their work despite having their period at endline (39 percent) compared to baseline (11 percent). Moreover, more women employees reported feeling confident in meeting their personal production targets on time while on their period at work at endline (26 percent) compared to baseline (14 percent).

Section 6.0 Cost-Benefit Analysis explores most impacts of the intervention on women and business’ outcomes through its focus on the cost-benefit analysis process.

a) Q: How would you rate the quality of your work while on your period? Would you say it is [graph categories]?



b) Q: How confident do you feel that you can meet your personal production targets on time while on your period at work? Did you feel [graph categories]?

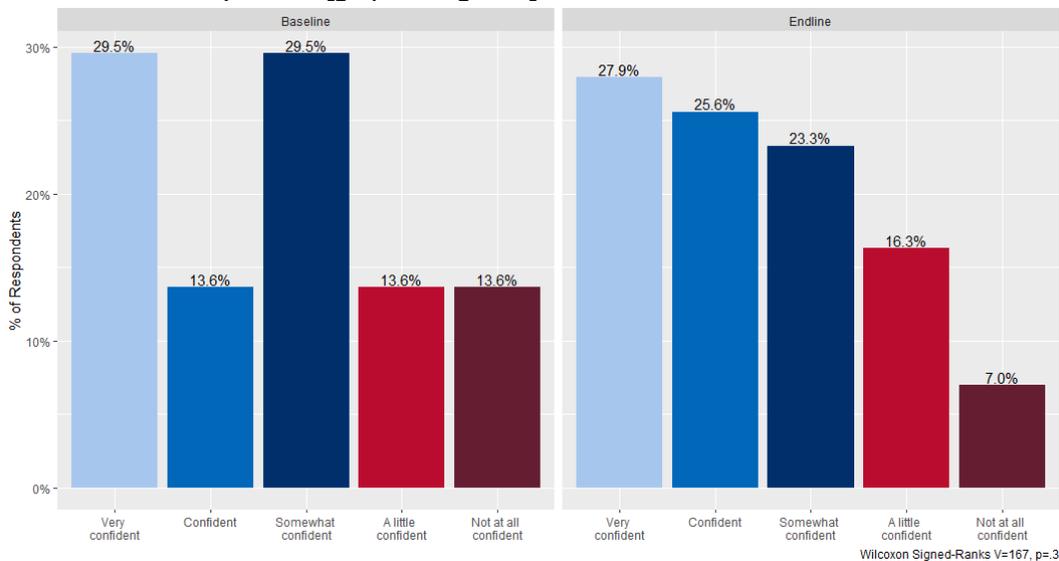


Figure 34. Changes between baseline and endline in the self-efficacy of women employees

Finding 20: Improved job satisfaction among menstruating employees

In baseline FGDs, women employees voiced that access to a reliable supply of menstrual products in the workplace, clean toilet facilities, a first aid room with emergency menstrual products, and the presence of supportive supervisors would relieve their stress, improve their self-esteem, and increase their happiness at work. At endline, 96 percent of women employees reported that their job satisfaction had improved compared to the year before, an increase from 71 percent at baseline, according to women's questionnaires (Figure 35). In FGDs, women attributed increased job satisfaction at endline to less shouting from supervisors, more concern from management about women's wellbeing, and consistent access to menstrual products. Women reported that the management's involvement with the intervention made them feel like the leadership cared about their wellbeing. According to the women's questionnaire at endline, 100 percent of women reported that the MHM interventions made them feel better about management's concern for its workers. In a KII, the first aid provider also reported greater job satisfaction at endline, compared to baseline, because she had improved capacity to help employees with their MHM needs.

However, some key workplace influencers had mixed levels of satisfaction with their expanded roles. MHM champions at Company B reported in a FGD that they did not feel adequately supported by management to perform their role as MHM champion; Company A reported higher satisfaction. MHM champions at Company B shared that they did not have a reliable supply of pain killers, access to enough beds for rest, enough toilet paper, and access to hot water closer to the first aid room, which they needed to support menstruating employees adequately. Though they raised some of these issues to management, their concerns were not addressed. However, worker relations representatives felt like their expanded role to support MHM and accompanying MHM education made them more effective as worker relations representatives.

The ladies are motivated and the morale is high. – HR manager, KII, Endline

We have more capacity to solve the MHM issues presented to us. If someone has an MHM-related challenge and they approach us, we solve it. Before the project, we were only able to facilitate for them to get a gate pass to go home, but now we have mechanisms to support them and we enjoy seeing them get better support. – Worker relations representative, FGD, Endline

Q: Compared to this time last year, would you say your satisfaction with your job has improved, stayed more or less the same, or worsened, overall?

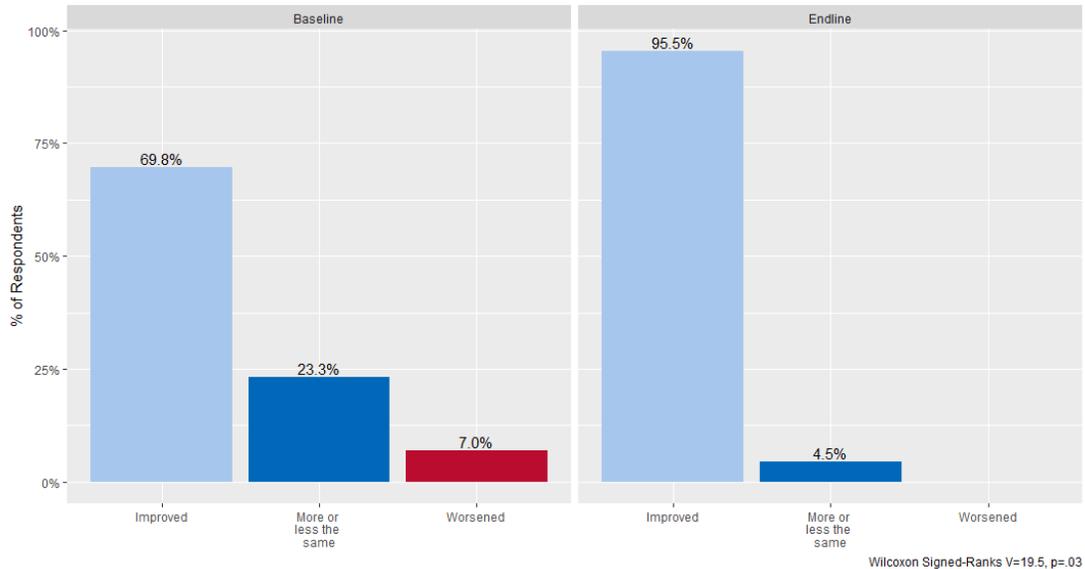


Figure 35. Changes in baseline and endline in women’s job satisfaction

Finding 21: Improved perceived corporate reputation among employees and leadership

At endline, supervisors and managers recognized that Company B’s effort to improve MHM in the workplace provided the company a competitive advantage in their industry. In endline KIIs, managers and leaders reported that the entire export processing zone knew about the intervention and that women wanted to work for Company B because of the intervention. Supervisors reported in endline FGDs that Company B had developed the reputation for being a company that cared about women. This external reputation seemed to trickle down to employees; 100 percent of women reported that a worker would be more likely to work for a company that provided MHM support and services instead of one that did not, when most workplaces were paying the same amount to their workers. Moreover, according to the women’s questionnaire at endline, 87 percent of women reported that the presence of MHM changes at the workplace resulted in workers being less likely to look for work elsewhere and 90 percent of women agreed that they were more likely to stay in their current job because of the on-site MHM changes. Supervisors reported in endline FGDs that women employees seemed to appreciate being employed at Company B because they thought that the management cared about them.

Even outside we have a reputation for being a company that cares about women and we are proud of it. – Supervisor, FGD, Endline

The women feel appreciated [because of the MHM activity]. They see that management cares for them very much. – Supervisor, FGD, Endline

The women feel proud to work for a unique company because other companies do not provide menstrual support. – Supervisor, FGD, Endline

5.0 SUMMARY OF BASELINE AND ENDLINE RESULTS, ACROSS ALL FOUR WORKPLACES

This section describes the impacts of the interventions on women employees and their employers between the four workplaces and links them with varying characteristics of the workplaces and intervention to explain differences in outcomes. In doing so, this section responds to parts “c” and “d” of the first research question of the activity:

- a. Which characteristics of the workplace (e.g., type of employer/sector, proportion of female employees/supervisors/managers, socio-demographic profile of female workforce, etc.) are associated with the greatest benefits for women employees?
- b. Under which conditions/context are there greater financial and social benefits for employers?

This section is structured according to the sections of the conceptual framework, as is the case with the previous country-specific sections (Section 3.0 Findings from Nepal and Section 4.0 Findings from Kenya). Each section begins with generalized findings across all four workplaces and then delves into differences between workplaces for each country setting. As noted above, this section focuses on explanations relating to the characteristics of the workplace as well as intervention modalities, reserving discussion of the findings relating to the implementation process for Section 8.0 Lessons Learned from Implementation and broader lessons learned for Section 9.0 Discussion and Overall Lessons Learned.

5.1 AWARENESS, INFORMATION, AND SELF-CONFIDENCE REGARDING MENSTRUATION

Awareness and self-confidence regarding menstruation increased over the course of the intervention with both women and men employees as well as supervisors and leadership reporting greater knowledge regarding the physiology of menstruation, the use and disposal of menstrual products, maintenance and use of toilets (in Nepal only), etc.

At baseline, within all four workplaces, there was a distinct lack of knowledge regarding menstrual health, including of the physiology of menstruation as a biological process; awareness regarding menstrual products including what is safe, hygienic, and absorbent; as well as how to properly dispose of menstrual waste. Table 14 below presents summative scores from eight (Nepal) and nine (Kenya) questions relating to menstrual knowledge that were part of the baseline women’s questionnaire:

Table 14. Women employees’ knowledge regarding menstruation

Workplace	Baseline Mean (SD)*	Endline Mean (SD)*	Difference in means (test statistic, p-value)
Nepal Company A	5.4 (1)	7.5 (0.7)	W = 59.5, p < .001
Nepal Company B (0–8)	5.8 (1)	7.8 (0.5)	W = 197.5, p < .001
Kenya Company A (0–9)	6.6 (1)		
Kenya Company B (0–9)	7.4 (1)		

* Scores range from 0-8 in Nepal and 0-9 in Kenya. The women’s endline questionnaire did not include items about menstrual knowledge because baseline scores were so high. Instead, the team solicited more information on knowledge through endline FGDs in Kenya.

Although lack of knowledge was more pronounced for younger staff members, such as at Nepal Company B where the average age was 25.9 years, there were considerable gaps even among older women employees. Unsurprisingly, the level of knowledge regarding menstruation was linked to educational attainment; for example, more educated workers at Kenya Company A displayed higher levels of knowledge at baseline relative to less educated workers at Kenya Company B.

Following the implementation of the workplace interventions, knowledge and awareness regarding menstrual health increased in all four workplaces, as revealed by comparison of baseline and endline data from the women's questionnaire (in Nepal only) and through qualitative evaluations of knowledge at baseline and endline in all four workplaces.⁸ In Nepal, knowledge improved by similar magnitudes at Company A and Company B, with employees exhibiting more knowledge about the physiology of menstruation, menstrual health complications, and ways to manage their menstrual health and hygiene at endline. In Kenya, there was greater change in knowledge at Company A than at Company B, likely because the scope of the education component was broader at Kenya Company A. The team was unable to negotiate and secure enough time to implement all intervention components at Kenya Company B. At both Kenyan workplaces, women employees requested information about menstrual health as it relates to SRH. This need was particularly pronounced at Kenya Company A where more women at endline (compared to baseline) mentioned needing support with irregular and contraception-induced changes to menstruation.

Interventions in both countries also focused on increasing knowledge among key workplace influencers (supervisors, managers, etc.) through sensitization efforts intended to improve the supportive environment experienced by employees who menstruate (5.4 Supportive workplace environments allow women to manage their menstruation without fear of stigma or embarrassment). During her endline KII, the nurse at Kenya Company A reported knowledge gain from her sensitization session with the medical advisor and admitted that she had not received any post-university training at the workplace at all; therefore, the MHM and patient-centered care elements in her training were reportedly useful.

Self-confidence relating to menstruation increased in all four workplaces with the greatest improvement at Kenya Company A and the lowest at Nepal Company B (also statistically insignificant). In Nepal, the smaller change in self-confidence from baseline to endline (in both workplaces and especially Company B) can be attributed to women being able to manage their periods even if they did so with maladaptive coping mechanisms such as overwearing products. Their confidence did increase however due to the education sessions, which increased knowledge regarding hygienic use of menstrual products. Table 15 shows the percentage of respondents who strongly agreed with the statement, "I feel confident to manage my menstrual period at work, including changing, disposing, or washing material," when given five response categories (ranging from "strongly disagree" to "strongly agree"). In this table and several following, for ease of interpretation, the report only presents the highest or lowest response category for questions using Likert scales. More complete data for questions using Likert scales are available in each of the country-specific sections as well as in the appendices. To test for differences in mean responses at baseline and endline, the research team used Wilcoxon Signed Ranks tests with paired samples (Kenya) and Wilcoxon Rank Sum tests with unpaired populations (Nepal).

⁸ As a reminder, the endline women's questionnaires in Kenya did not include a module on menstrual knowledge.

Table 15. Women employees who strongly agreed with the statement, “I feel confident to manage my menstrual period at work”

Workplace	Baseline	Endline	Difference in distributions (test statistic, p-value)
Nepal Company A	64.9%	100%	W = 372, p < .001
Nepal Company B	60.0%	57.8%	W = 1799.5, p = .81
Kenya Company A	35.1%	97.3%	V = 0, p < .001
Kenya Company B	45.5%	97.7%	V = 0, p < .001

Qualitative evidence corroborates the findings from the women’s questionnaire. At Kenya Company A, women employees mentioned in endline FGDs that despite fears about menstruation-related gossip, bullying, or shaming, they felt more confident about understanding their own bodies and understanding certain symptoms to be related to menstruation, which allowed them to more confidently ask for permission to take leave when not feeling well. The Appreciative Inquiry session at Kenya Company A (not facilitated at Kenya Company B) focused on “breaking the silence” and increasing confidence to speak about menstruation, which may have contributed to increased confidence. In Nepal, increased knowledge about menstruation as a normal biological process coupled with the provision of free menstrual products at work was linked to greater self-confidence in managing periods. At Nepal Company A, women and men alike discussed how they had become ambassadors for MHM in their communities, and they exhibited greater confidence when discussing menstruation.

5.2 ACCESS TO SAFE/HYGIENIC, AFFORDABLE, ACCESSIBLE, ACCEPTABLE, AND ABSORBENT MATERIALS OR PRODUCTS AND SUPPLIES

Free provision of menstrual supplies at launch and throughout the project was a critical element of the intervention. Accordingly, access to sufficient, comfortable, safe, hygienic, and absorbent products in the workplace increased from baseline to endline.

The research team in Nepal distributed *Maryadit Karyasthal* (dignified menstruation bags), and the research team in Kenya distributed menstrual wellness bags; these distributions occurred at the start of the intervention. The bags included a choice of menstrual supplies like disposable and reusable pads, menstrual cups in Kenya, and underwear in Kenya Company B and Nepal workplaces. The team also provided education on how to use menstrual products. This intervention component increased women’s knowledge about the types of safe, hygienic, and absorbent products available to manage menstruation as well as access to these materials. In Kenya, menstrual cups were greatly appreciated as a reusable product that could be used for a longer duration, often not needing to be changed during working hours. Interventions in both countries provided a regular supply of disposable pads at work, thereby reducing psychosocial and financial stress associated with procuring these products.

Data from the women’s questionnaire at baseline and endline revealed improvements in women having enough pads to change them when needed in all four workplaces (Table 16), their perceived ability to get more pads when needed (Table 17), and relatedly, reduced worry about getting more pads when needed (Table 18). For all three related questions in the women’s questionnaire, there were greater changes between baseline and endline at the Kenya workplaces relative to Nepal. The smallest change was observed at Nepal Company B (also statistically insignificant for all three questions). At Nepal Company B, despite the provision of menstrual products throughout the intervention, women employees were still concerned about access to menstrual products, particularly at the end of the

intervention. At Kenya Company B, provision of free products was not a panacea for access; women sometimes still struggled to access free pads on site due to limited break time and pressures to meet work demands. At all four workplaces, women employees identified at baseline that menstrual products were expensive and financially burdensome to obtain. In the FGDs and the women’s questionnaires, women reported that these purchases strained already low wages (see Appendix B: Quantitative Data Summaries). The financial burden of purchasing products decreased across all four workplaces at endline.

Table 16. Women employees who reported always having enough menstrual materials to change them when desired

Workplaces	Baseline	Endline	Difference in distributions Test statistic, p-value
Nepal Company A	62.2%	87.1%	W = 430.5, p = .022
Nepal Company B	72.7%	73.4%	W = 1747.5, p = .93
Kenya Company A	54.1%	100.0%	V = 0, p < .001
Kenya Company B	47.6%	97.7%	V = 0, p < .001

Table 17. Women employees who reported always being able to get more menstrual pads when needed

Workplaces	Baseline	Endline	Difference in distributions Test statistic, p-value
Nepal Company A	62.2%	83.9%	W = 449, p = .049
Nepal Company B	67.3%	76.6%	W = 1596.5, p = .26
Kenya Company A	38.0%	100.0%	V = 0, p < .001
Kenya Company B	47.7%	90.7%	V = 28, p < .001

Table 18. Women employees who reported never worrying about getting more menstrual pads when needed

Workplaces	Baseline	Endline	Difference in distributions Test statistic, p-value
Nepal Company A	40.5%	74.2%	W = 756.5, p = .011
Nepal Company B	27.3%	35.9%	W = 1998, p = 0.16
Kenya Company A	32.4%	97.3%	V = 301, p < .001
Kenya Company B	29.5%	88.4%	V = 406.5, p = .001

Women employees also expressed greater satisfaction related to products, notably greater comfort associated with the menstrual products at endline (Table 19) and greater cleanliness of products (Table 20) (all statistically significant). The greatest changes in self-reported comfort between baseline and endline were at Kenya Company B. This is unsurprising as women reported using cut pieces of cloth during baseline FGDs. Changes in cleanliness with products between baseline and endline were roughly commensurate between all four workplaces.

Table 19. Women employees who always felt that their menstrual materials were comfortable

Workplaces	Baseline	Endline	Difference in distributions Test statistic, p-value
Nepal Company A	58.3%	93.5%	W = 358.5, p < .001
Nepal Company B	45.5%	95.3%	W = 894.5, p < .001
Kenya Company A	67.6%	100.0%	V = 0, p = .0014
Kenya Company B	45.5%	95.3%	V = 0, p < .001

Table 20. Women employees who were always satisfied with the cleanliness of their menstrual materials

Workplaces	Baseline	Endline	Difference in distributions Test statistic, p-value
Nepal Company A	62.2%	96.8%	W = 375, p < .001
Nepal Company B	59.3%	96.9%	W = 499.5, p < .001
Kenya Company A	73.0%	100.0%	V = 0, p = .003
Kenya Company B	65.9%	100.0%	V = 0, p < .001

Women also reported less anxiety associated with menstrual blood leaking to outer garments and less concern about products moving around while being worn from baseline to endline. Changes were more pronounced and statistically significant for the Kenyan workplaces as compared to those in Nepal.

Table 21. Women employees who never worried that their menstrual materials would leak blood

Workplaces	Baseline	Endline	Difference in distributions Test statistic, p-value
Nepal Company A	29.7%	51.6%	W = 628.5, p = 0.46
Nepal Company B	16.4%	12.5%	W = 1925, p = 0.32
Kenya Company A	43.2%	97.3%	V = 210, p < .001
Kenya Company B	34.1%	79.1%	V = 354, p < .001

Table 22. Women employees who never worries that their menstrual materials would move from place

Workplaces	Baseline	Endline	Difference in distributions (test statistic, p-value)
Nepal Company A	29.7%	51.6%	W = 649, p = 0.31
Nepal Company B	14.5%	20.3%	W = 2089.5, p = .051
Kenya Company A	45.9%	91.9%	V = 176, p = .027
Kenya Company B	40.9%	72.1%	V = 287.5, p < .001

In addition to increasing access and choice and reducing product-related stress, provision of free menstrual products also improved MHM practices (see 5.5 Improved MHM practices).

5.3 ACCESS TO SAFE AND CLEAN FACILITIES THAT ARE EQUIPPED WITH SOAP AND WATER TO BATHE ONESELF AND CLEAN OR DISPOSE OF MATERIALS

Facility improvements were required at all four workplaces, according to findings from the infrastructure assessments. From before the intervention to after, the number and cleanliness of toilets improved in all four workplaces; however, changes were not uniform, nor did access increase for all staff.

Baseline infrastructure assessments revealed the following, highlighting the need for improvements:

Nepal Company A

- Adequate number of operational, separate, and well-lit toilets for women and men with private stalls, according to international standards. Disposal bins are located in toilet blocks (not stalls). Toilet paper was not available. There were handwashing facilities with running water but not soap. No private facilities for women to bathe/wash themselves or to wash reusable menstrual products. Toilets were cleaned twice a day.
- Employees were permitted to use toilets at all times during the workday and did not need to ask permission from their supervisor.

Nepal Company B

- There were no separate toilet facilities for women and men. Toilet facilities did not have soap, water, lockable doors, or proper lighting. There were no bins for menstrual waste disposal. Women reported feeling uncomfortable with the lack of female-friendly infrastructure and the absence of crucial sanitation resources, as they could not clean themselves adequately after changing menstrual products in toilets.

Kenya Company A

- Adequate number of separate, largely private, women's toilet facilities with lockable stalls. Disposal bins were available in the toilet facility (not inside stalls). All toilet facilities contained mirrors for women's menstrual health needs. Toilet paper was not consistently available. Water was provided near sinks in drums when there was no running water available; soap was not reliably available. There were no private facilities for women to bathe/wash themselves or to wash reusable menstrual products. None of women's individual toilet stalls contained a shelf and hook for hygienically storing belongings.
- Employees were permitted to use toilets at all times during the workday.

Kenya Company B

- Despite having separate toilets for women and men, not all of the women's toilet facilities afforded privacy. There were not enough toilets for women: the ratio of women to toilets was 103:1. Disposal bins were placed within stalls and within the toilet facilities. Some toilet stalls contained a shelf and hook for hygienically storing belongings during use. Toilet paper was not regularly available inside toilet stalls or facilities. Water was consistently available, but not soap. Only some private facilities at the workplace supported women bathe-washing themselves or wash their reusable menstrual products.

- Employees were only permitted to use toilets during specific times. They could use the toilet facilities between 7–8 a.m. when arriving at the workplace, 9–10 a.m. during a break, and 12:30–1:30 p.m. for lunch. Toilets were cleaned at 8 a.m., 10 a.m., and 2p.m.

At Nepal Company A, there had been improvements in the facilities following the formative assessment in February/March 2020. The company had rebuilt the women and men’s toilet facilities, had started regular cleaning and maintenance of toilets, and improved access to soap, especially since the onset of COVID-19. Many employees were excited by the improved toilet facilities and considered it to be the best output from the MHM intervention. Several employees observed in FDGs at endline that everyone at the workplace seemed to take ownership of keeping their toilets and communal spaces clean, with men employees noting that their menstruating colleagues’ menstrual hygiene seemed to have improved as well. Women employees benefited from a privacy wall and newly installed taps in toilet facilities, which allowed them a private space to wash used menstrual products and bloodstained work clothes. Nepal Company B installed new toilets after the endline as a direct result of the activity’s engagement with the leadership and management of the factory. Employees at both workplaces were taught how to properly use and maintain the existing infrastructure.

Following the baseline infrastructure assessment, management at Kenya Company A committed to improving deficiencies in WASH infrastructure by way of several activities: closing the gap in the ceiling between men and women’s toilet facilities in the spinning department; tiling and painting the toilet facilities at loading/unloading and near weaving; ensuring running water in toilet facilities is routinely available; providing soap and toilet paper (via the guard) for all toilet facilities; hiring a woman cleaner to clean women’s toilet facilities; and paying for weekly menstrual waste pick-up. Employees at Kenya Company A were pleased with the improvements in cleanliness, quality, and accessibility of toilets at endline.

Few infrastructure upgrades were implemented at Kenya Company B by endline, in comparison to Company A, aside from having cleaner toilets, expanding the hours during which women were permitted to use the toilets, and the installation of water taps in women’s toilet stalls for washing selves and reusable menstrual products. Women at Company B were able to wash menstrual cups in the bathroom stalls because there were taps installed inside the stalls. In contrast, some women at Kenya Company A reported not feeling comfortable washing menstrual cups at work, as there were no taps inside stalls. Although the WASH infrastructure at Kenya Company B remained inadequate at endline, it is important to note that the company was in the process (throughout the intervention) of building a new warehouse within the export processing zone which would have 17 new and functioning toilets for women employees’ use. This building project was not completed during the intervention timeline.

The level of infrastructure improvements in each workplace correlated with the commitment of leadership and management to invest in upgrades. Management at both Nepal Company A and Kenya Company A were much more invested in the well-being of their employees relative to the management at the other two workplaces. Additionally, infrastructural improvements in all four workplaces extended beyond increasing the number of toilets, improving cleanliness, and adding certain elements (e.g., locks to doors, hooks inside stalls). They also included changes in operational practices that allowed women the time to use the toilets. Increasing access to facilities required sensitizing supervisors and managers about women’s needs to use toilets (see 5.4 Supportive workplace environments allow women to manage their menstruation without fear of stigma or embarrassment). Further, in addition to adding waste bins and increasing disposal services, the intervention sought to increase awareness and

knowledge of how to properly dispose of menstrual waste (see 5.1 Awareness, information, and self-confidence regarding menstruation).

5.4 SUPPORTIVE WORKPLACE ENVIRONMENTS ALLOW WOMEN TO MANAGE THEIR MENSTRUATION WITHOUT FEAR OF STIGMA OR EMBARRASSMENT

Comparing workplace culture and environment from before the intervention to afterwards, there was a change in the culture of silence relating to menstruation in all four workplaces. Those who wanted to speak about menstruation felt that they could do so without experiencing any embarrassment or derision from colleagues. There was also greater perceived support from leadership and management, who better appreciated the needs of menstruating employees at endline.

Addressing menstrual stigma and taboos and working with key workplace influencers were core parts of the *MHM in the Workplace* interventions. In all four partner companies, there was a real need to change the culture of silence relating to menstruation. In Nepal, education and BCC products sought to normalize menstruation as a biological process and in doing so, to break down taboos and stigma relating to menstruation. In Kenya, BCC and sensitization materials sought to transform attitudes, beliefs, and norms that women must suffer “the curse of menstruation” silently and without complaint.

At Nepal Company A and Nepal Company B, employees reported a strong culture of silence around menstruation in general and in the workplace specifically. Women employees at both workplaces shared that after the intervention, especially through the education sessions, they were able to discuss menstruation and menstruation-related challenges and solutions among each other. Communication about menstruation improved from baseline to endline between menstruating and non-menstruating employees. At both workplaces, many employees noted that menstrual stigma created an unsupportive work environment for menstruating employees; however, at endline, employees credited education sessions with reducing common misconceptions, stigma, and misinformation about menstruation in the workplace, thereby creating a more supportive work environment. Supervisors and management showed improved understanding of employees’ menstruation-related needs at endline, especially at Nepal Company B, and many employees at Nepal Company A expressed that women felt greater agency, self-efficacy, and empowerment regarding menstruation in the workplace, even noting greater gender equality and camaraderie among men and women employees.

Additionally, at Nepal Company A, women and men employees reported in endline FGDs that they felt a stronger sense of community and mutual respect with each other, despite ethnic differences. The research team observed that employees took “ownership” of MHM as an issue that was important to them and that they advocated for a more MHM-friendly workplace as a group. Although some tasks at Nepal Company A are performed by men or women only, the MHM intervention seemed to create a common ground for men and women to learn, discuss, and grow together.

In Kenya, breaking the culture of silence around menstruation was achieved to a greater degree at Company A than Company B. The difference in outcome was attributable to the larger “footprint” of the intervention at Company A, which had a stronger focus on BCC and sensitization. At Company A, women employees reported greater “freedom” as a result of the intervention. “Freedom,” was described as employees feeling more open and comfortable with one another, more understood by their supervisors, more comfortable carrying pads in the open, greater empowerment in the workplace, and greater confidence to stand up for themselves and push back on negative comments regarding menstruation. This concept of freedom did not come up in endline qualitative findings at Company B. At

Company A, men also reported increased openness to speak about menstruation at endline over baseline. However, restrictive norms persisted. At Kenya Company A, perceptions regarding moodiness changed very little. Some key staff (i.e., HR manager, woman supervisor, and some men employees) still reported these perceptions at endline. This concept (perceptions of moodiness and “being emotional”) did not come up at Company B at all. At endline at Company B, women reported fewer instances of harassment, bullying, and differential treatment for when they were menstruating at work. More women reported comfort discussing menstrual needs with others in the workplace. By collectively experiencing the intervention, they felt *less alone* in dealing with their menstruation-related concerns and more encouraged to seek help.

Data from the women’s questionnaire revealed improvements in perceived support for menstruation as measured through an index that combines responses to five Likert scale questions. In Nepal, these covered support from colleagues, supervisors, and management. In Kenya, the questions pertained to storage opportunities and support from supervisors, management, and the nurse or first aid provider. Higher scores indicate more support, with the highest achievable score being 22 (Nepal) or 12 (Kenya). Table 23 shows that support for managing menstruation was much higher at both baseline and endline in Nepal compared to Kenya with greater improvements in Nepal as well.

Table 23. Mean summative scores for support in managing menstruation

Workplaces (summative score range)	Baseline Mean (SD)	Endline Mean (SD)	Difference in means (test statistic, p-value)
Nepal Company A (0-22)	14.7 (6)	18.5 (5)	W = 315.5, p = .002
Nepal Company B (0-22)	12.6 (5)	17.3 (5)	W = 770, p < .001
Kenya Company A (0-12)	6.5 (3)	10.1 (2)	V = 18.5, p < .001
Kenya Company B (0-12)	7.6 (3)	8.4 (2)	V = 234, p = .075

Looking at a specific question within the support index, employees reported greater comfort in asking their supervisors to take menstruation-related leave in all four workplaces at endline (Table 24). There was much greater perceived support at baseline at the Nepal workplaces compared to the Kenya ones, likely because both Nepal workplaces were smaller in nature. In Nepal, some of the workers were immediate relatives and lived and worked on the premises. These conditions created a more familial environment characterized by informal and flexible working relationships. In addition, the proximity of the working and living quarters potentially made menstrual-related work breaks less disruptive—co-workers may have been more sympathetic to one another.

The change between baseline and endline in Kenya was pronounced at Company A but not so at Company B. At Company B, women reported in endline FGDs that they felt more comfortable approaching key workplace influencers like the MHM champion and worker relations representatives to seek MHM-related support, but not necessarily supervisors. They would go to MHM champions and worker relations as go-betweens to communicate about menstruation with supervisors. However, women at Company B did report a positive change associated with supervisors: they experienced less shouting and harsh treatment from supervisors, also reported at Company A.

Table 24. Women employees who felt comfortable in telling supervisor that they need to leave work for menstruation-related reasons to a large extent

Workplaces	Baseline	Endline	Difference in distributions (test statistic, p-value)
Nepal Company A	29.7%	56.7%	W = 353.5, p = .006
Nepal Company B	25.9%	45.3%	W = 1202, p = .001
Kenya Company A	10.8%	40.5%	V = 10.5, p < .001
Kenya Company B	40.9%	43.2%	V = 125, p = 0.79

Women at Kenya Company A and Kenya Company B also felt supported by other staff at their workplaces: the ability of Company A’s nurse and Company B’s first aid provider to address employees’ menstruation-related concerns improved from baseline to endline and they felt better equipped to serve as a resource, as reported through endline KIIs. Also, more women reported approaching the Kenya Company B first aid provider about MHM at endline than at baseline.

The managing director at Kenya Company A reported increased women’s empowerment, noting, "The project has empowered women in a male-dominated company." The intervention was linked with movement toward greater gender equity at Company A; women reported feeling more respected at endline, and the company initiated a parallel initiative to the intervention to hire more women (increasing by approximately 50 percent from baseline to endline).

5.5 IMPROVED MHM PRACTICES

Hygienic use of menstrual products improved: more women used safe, absorbent, and hygienic products rather than what they could procure without cost or at low cost. They also changed products more frequently. Disposal practices also improved with the installation of disposal bins and education sessions/posters about how to properly dispose of menstrual waste.

In all four workplaces, there was better use of menstrual products as reported in the qualitative and quantitative data. In endline FGDs, women reported being able to substitute wearing cloth (*kapada* in Nepal and scrap cut pieces of cloth in Kenya) with other more hygienic and absorbent products provided through the intervention. Quantitative data about product usage also showed that more women shifted to using the products provided by the intervention (disposable and reusable pads, menstrual cups) (Table 25). Additionally, in endline FGDs, women reported that the provision of menstrual products at work led them to change their products more frequently and overwear less.

Table 25. Percentage of women employees who reported using specific menstrual products

Workplaces	Disposable pads		Reusable pads		Menstrual cups		Cloth/other	
	Baseline	Endline	Baseline	Endline	Baseline	Endline	Baseline	Endline
Nepal Company A	75.6	90.3	13.5	16.1			73.0	12.9
Nepal Company B	89.1	95.3	7.3	14.1			18.1	14.1
Kenya Company A	97.3	91.9	0	5.7	0	8.1	0	0

Workplaces	Disposable pads		Reusable pads		Menstrual cups		Cloth/other	
	Baseline	Endline	Baseline	Endline	Baseline	Endline	Baseline	Endline
Kenya Company B	100.0	88.6	2.3	13.6	0	18.2	2.3	0

As discussed in 5.2 Access to safe/hygienic, affordable, accessible, acceptable, and absorbent materials or products and supplies, workers reported being more satisfied with the comfort and cleanliness afforded by these products. In Nepal, women also reported having fewer menstrual health complications at endline FGDs. Additionally, they reported greater comfort in consulting a medical doctor in case of any menstrual health issues – comfort that was likely linked with their experience working with the doctor who was part of the intervention team.

Disposal practices also improved. At all four workplaces in baseline, cleaners and management reported in KIIIs that there were frequent blockages of toilets in part due to women flushing menstrual products. In Nepal, women themselves shared during baseline FGDs that they stashed used menstrual products in cracks in the toilet walls or in the ceilings of the toilets. Infrastructure assessments revealed that not all workplaces had disposal bins for menstrual waste (like Nepal Company B) or that they had disposal bins only within the toilet facility outside of toilet stalls (like Kenya Company A). At endline menstrual waste disposal improved, likely due to education and BCC efforts to promote better waste disposal coinciding with the placement of waste bins in all toilets. Table 26 shows that a greater proportion of women disposed of menstrual waste properly at endline.

Table 26. Where women employees most often disposed their used menstrual materials

Workplaces	Transported home		In a bin in the latrine		In a bin at the factory		In community rubbish	
	Baseline	Endline	Baseline	Endline	Baseline	Endline	Baseline	Endline
Nepal Company A	28.1	6.7	40.6	53.3	28.1	40.0	3.1	0
Nepal Company B	10.9	0	8.7	3.4	78.3	96.9	2.2	0
Kenya Company A	0	0	97.2	100.0	2.8	0	0	0
Kenya Company B	0	0	88.6	100.0	6.8	0	0	0

5.6 IMPACTS ON WOMEN EMPLOYEES AND EMPLOYERS

Absenteeism and presenteeism declined in all four workplaces, with greater effects on absenteeism in Kenya. Women also expressed greater job satisfaction and a higher sense of self-efficacy in performing workplace responsibilities while menstruating.

In terms of the influence on workplace and business outcomes for women and employers, there were decreases in absenteeism in nearly all workplaces. Table 27 and Table 28 show differences in the days and hours which employees were absent at baseline and endline. Reductions in absenteeism in terms of days were most marked at Kenya Company B and Kenya Company A but statistically significant for only Kenya Company B and Nepal Company B. In terms of hours, absenteeism decreased at all workplaces

except Nepal Company B where there was a slight but statistically insignificant increase in the hours which employees were absent at endline.

Table 27. Mean days missed per woman due to menstruation-related reasons

Workplaces	Baseline Mean (SD)	Endline Mean (SD)	Difference in means (test statistic, p-value)
Nepal Company A	0.29 (0.8)	0.03 (0.2)	t = 1.8, p = .08
Nepal Company B	0.36 (0.7)	0.12 (0.3)	t = 2.38, p = .02
Kenya Company A	0.27 (0.9)	0 (0)	t = 1.76, p = .08
Kenya Company B	0.48 (1)	0.02 (0.1)	t = 2.35, p = .02

Table 28. Mean hours missed per woman due to menstruation-related reasons

Workplaces	Baseline Mean (SD)	Endline Mean (SD)	Difference in means (test statistic, p-value)
Nepal Company A	0.89 (1.5)	0.22 (0.8)	t = 2.3, p = .03
Nepal Company B	1 (2)	1.4 (3)	t = -0.82, p = .42
Kenya Company A	1.2 (2)	0.02 (0.2)	t = 3.87, p = .0004
Kenya Company B	0.55 (1.6)	0.09 (0.6)	t = 1.7, p = .09

At Nepal Company A, employees observed in FGDs that absenteeism decreased from baseline to endline, as women no longer frequently went home during the work day to change or find their menstrual products. Instead, women used the factory toilets to change their menstrual products and resumed working sooner than they would if they had left the workplace to go home.

At Kenya Company A and Kenya Company B, reduced absenteeism was linked with increased access to menstrual products, as reported during endline FGDs. At Kenya Company B, women employees also shared that availability of pain management resources on site had led to lower absenteeism. Women at both Kenya workplaces noted that they offered more honest explanations about why they had to miss a day or part of a day of work, if they had to be absent. Data from the women’s questionnaire emphasizes that women felt more comfortable asking for menstruation-related leave at endline. In endline KIs and FGDs, managers and supervisors also appreciated candid (rather than vague) explanations from their employees on why they needed to miss work.

In addition to lower absenteeism, there was also lower presenteeism at endline in all four workplaces (Table 29). Although there were relative improvements in presenteeism in all four workplaces, the difference was only statistically significant at Kenya Company B.

Table 29. Mean summative scores on women employees' presenteeism at work

Workplaces	Baseline Mean (SD)	Endline * Mean (SD)	Difference in means (test statistic, p-value)
Nepal Company A	6.2 (4)	4.7 (4)	t = -1.17, p = .25
Nepal Company B	11.8 (6)	10.0 (5)	t = -1.69, p = .092
Kenya Company A	8.8 (5)	6.8 (5)	t = -1.95, p = .059
Kenya Company B	9.6 (5)	6.2 (5)	t = -4.68, p < .001

*A lower score at endline compared to baseline denotes lower presenteeism

Through data collected in the women’s endline questionnaire, women also reported improved job performance following the intervention. In all four workplaces, women rated the quality of their work while on their period as higher at endline with statistically significant differences at Nepal Company A, Nepal Company B, and Kenya Company A (Table 30). They also perceived that their ability to meet personal production targets while on their period was higher post-intervention, though only the difference at Nepal Company A was statistically significant (Table 31).

Table 30. Women employees who rated the quality of your work as excellent while on their period

Workplaces	Baseline	Endline	Difference in distributions (test statistic, p-value)
Nepal Company A	2.7%	22.6%	W = 329.5, p < .001
Nepal Company B	0.0%	14.1%	W = 972.5, p < .001
Kenya Company A	18.9%	43.2%	V = 4, p = .002
Kenya Company B	22.7%	20.5%	V = 135, p = .28

Table 31. Women employees who very confident in meeting personal production targets on time

Workplaces	Baseline	Endline	Difference in distributions (test statistic, p-value)
Nepal Company A	32.4%	61.3%	W = 402, p = .022
Nepal Company B	9.1%	17.2%	W = 1398.5, p = .04
Kenya Company A	27.0%	45.9%	V = 80.5, p = .013
Kenya Company B	29.5%	27.9%	V = 167, p = .26

At both workplaces in Nepal, free provision of menstrual products on site allowed women to save time they would have spent to leave the workplace and buy products, which further allowed them to be more productive at work. At Nepal Company A, employees noticed improvements in productivity and work performance, which they attributed to reduced absenteeism from menstruating colleagues. However, some women tolerated negative impacts of menstruation on their work performance (such as menstrual pain) and continued their work to avoid losing wages from not meeting production targets, which the research team observed in both Kenya workplaces as well.

In endline FGDs and KIIs at the two Kenya workplaces, women employees as well as supervisors and managers reported improvements in productivity following the intervention. At Kenya Company A, supervisors and managers linked higher productivity to the increased availability of pads at work, and decreased stress and a more supportive work environment for women. Similar explanations were offered at Kenya Company B where supervisors and managers attributed improved productivity to reduced absenteeism, greater comfort for women to manage their periods at work, and a more supportive environment.

Job satisfaction also improved from baseline to endline in all four workplaces (Table 36), as reported in the women’s questionnaire. Qualitative data supported this finding. At both Kenya Company A and Kenya Company B, women employees’ self-reported greater job satisfaction was associated with the provision of menstrual products and the related lower financial burden of procuring products, upgrades to toilets (only at Kenya Company A), and greater support from supervisors. Women also reported feeling more valued as employees at both workplaces. Women at all four workplaces in Kenya and

Nepal reported feeling that company management cared about their well-being; at Nepal Company B, employees even reported feeling a greater sense of dignity as employees.

Table 32. Women employees who reported improved job satisfaction

Workplaces	Baseline Mean (SD)	Endline Mean (SD)	Difference in distributions (test statistic, p-value)
Nepal Company A	21.6%	51.6%	W = 364, p = .003
Nepal Company B	14.3%	39.7%	W = 1515.5, p = .1
Kenya Company A	45.9%	100.0%	V = 0, p < .001
Kenya Company B	69.8%	95.5%	V = 19.5, p = .033

6.0 COST-BENEFIT ANALYSIS

The CBA portion of the MHM in the Workplace intervention set out to conduct two separate but related analyses: a return on investment (ROI) analysis, which weighs the costs of implementing the intervention with the benefits the company accrues, and a broader CBA, which compares the costs of the intervention to the social (also referred to as economic) benefits of providing adequate MHM. Within these analyses, there are two main categories of variables: market variables, where the value is known or easily calculated (such as the cost of one day's labor) and non-market variables, in which variables do not have a clearly defined market value but are valued in terms of what individuals would be willing to pay for them (such as increased comfort at the workplace). The team developed a set of position papers, which operationalize these variables.

6.1 MONETIZATION OF MARKET VARIABLES

In the November 2020 approved CBA Plan, the CBA team laid out the methods for conducting a friction cost approach to estimating the benefits from the intervention. This approach estimates losses to a company caused by poor health or absenteeism through a calculation of variables including turnover, production errors, and workplace efficiency, among others. This approach was based on the assumption that companies kept accurate records for each variable.

The data collected at baseline from the Kenya workplaces suggested that this assumption could not be met. Partly owing to the challenge of asking the companies to provide data from 2019 (a year in which workplace operations were not affected by COVID-19 related shutdowns, but for which records were no longer kept), key information was missing or inaccurate. In addition, companies were unwilling to share all required data. As an alternative to the friction cost approach, the CBA team chose to use the human capital approach to estimating returns on productivity. This approach calculates losses to the company by weighing work absences against employee wages. Over a short period, the human capital approach is estimated to be as accurate as a friction cost approach.

Sources of data were disparate. Variables such as labor costs of employees participating in intervention sessions, costs of menstrual materials, and the costs of improvements to workplace infrastructure were tracked directly throughout the course of the project. Wage data and employee records were obtained directly from the companies. Absences were assessed via self-report in the women's questionnaire.

6.2 MONETIZATION OF NON-MARKET VARIABLES

To calculate the value of non-market variables, the project used a willingness-to-pay (WTP) survey delivered at all four workplaces at endline, as well as a fifth survey at a textile factory in Tanzania. The WTP presented a hypothetical scenario in which respondents were asked to choose between two job positions, one at a workplace with an intervention similar to the MHM in the Workplace intervention, and a second workplace paying a higher salary without the intervention.

The team estimated the mean WTP by using a benefit transfer approach from data collected in Tanzania. The team utilized data from Tanzania because women in the intervention workplaces are only able to provide a willingness to accept giving up the intervention, as they had just experienced its benefits. However, this analysis estimates an ex-ante valuation and therefore requires WTP from a population that would not have this perspective (i.e., Tanzanian factory workers).

Data collection in Tanzania presented several difficulties. First, enumerators suspected that many survey respondents were answering strategically, rather than truthfully. Some were suspicious that responses would be shared with management and possibly used as a loyalty test. This fear was likely heightened by management’s promotion of the survey and by the delivery of the survey at the company entrance. Other respondents may have believed that their answers could lead to future interventions providing free goods or services. Finally, researchers found considerable acquiescence bias, also known as “yea-saying,” where a majority of respondents accepted any salary difference used in the question.

The team reviewed the data to identify those respondents where bias may have affected accuracy of the data. WASHPaLS took several steps in the final analysis to arrive at a more accurate WTP figure. First, the team excluded individuals with responses the team deemed “irrational”—those who stated they would accept salaries below TSh 100,000 per month, as this was significantly below the minimum salaries offered, and those that requested more than TSh 200,000 per month to work at the workplace with the intervention, compared to the option of TSh 200,000 at a workplace without the intervention. Next, the analysis excluded those respondents who said their maximum WTP was equal to the value offered in their question, under the assumption they were “yea-saying.” Finally, to more accurately capture the true WTP, the team used a response to a question that asked respondents what they would choose if the hypothetical salaries were offered in their current position – rather than in an imaginary job. After excluding the irrational respondents and “yea-sayers,” the team used the median responses and found respondents were willing to work at a job which paid a salary TSh 18,000 per month (~\$8) lower if they worked in a workplace with the intervention. The team assumed that this final valuation of \$8 is only applicable to female respondents due to the limited sample of male workers.

6.3 RESULTS FROM WORKPLACES IN NEPAL

The total cost of the MHM in the Workplace interventions in Nepal was \$9,025 at Nepal Company A and \$2,827 at Nepal Company B. Over the course of a 10-month intervention period, the respective costs per woman employee were \$201 and \$60 respectively. The major discrepancy in intervention costs come from infrastructure improvements. Company A built and renovated women’s latrines – infrastructural costs totaled \$6,271. At Company B, infrastructural improvements were not started until November of 2021; because they had no impact on the data collection period, those costs are not included in the total costs of the intervention.

At Company A, infrastructural improvements were the largest cost: 69.5 percent of the total. Materials contributed 25 percent of total costs, close to evenly split between disposable pads (10 percent of total costs) and reusable pads (8 percent of total costs). If these costs are projected over two years, disposable pads, the only recurring materials cost would comprise 30 percent of total of the total intervention costs. Labor costs represented only 6 percent of total costs. In contrast, without infrastructural improvements, materials were 82 percent of the total costs at Company B over 10 months, and would represent 87 percent of total costs if infrastructural improvements were not made over 24 months.

Table 33. Benefit and cost data for Nepal, by component and timeframe

Time Period	Workplace	Total benefits					Total costs			
		Benefit value (\$USD)	% Reduced absences	% Reduced healthcare costs	% Women's Economic Benefits	% Time Savings	Value (\$USD)	% Materials	% Infra-structure	% Labor
10-Months	Company A	8298	11	42	43	4	9025	25	69	6
	Company B	9875	8	44	49	--	2827	82	0	18
24-Months	Company A	19334	11	42	43	4	9888	30	64	6
	Company B	22968	8	44	49	--	4452	87	0	13

Despite dramatically different program costs, the total benefits were relatively similar between the two workplaces: \$8,298 at Company A and \$7,735 at Company B. The benefits from reduced healthcare expenses at both workplaces were substantial: 42 percent of benefits at Company A and 44 percent of benefits at Company B. These benefits represent an area of some uncertainty given such high figures. At Company A, women spent on average \$12.31 in the month prior to the baseline survey, while women at Company B spent \$11.69. These costs decreased in the month prior to endline to, on average, \$5.16 and \$4.06, respectively, for total costs savings per month equivalent to \$7.15 and \$7.63. These figures were self-reported by women, and the team has limited data available on what these expenditures represent (e.g., medicines, clinic visits), though at least one woman noted having to undergo an extensive operation prior to baseline.

Reduced absences represented 11 percent and 8 percent of total intervention benefits at Company A and Company B, respectively. Self-reported absences at baseline were roughly three hours per month at both workplaces. At endline, absences decreased to just 20 minutes on average at Company A, and one and a half hours at Company B. Across the entire female workforce, this equated to 121 hours saved per month at Company A, and 86 hours saved per month at Company B. WASHPaLS calculated an additional time savings benefit at Company A, as with the construction of a new latrine, women no longer returned to their onsite homes to change menstrual materials, but were instead able to use the latrines within the actual workplace. The team valued this savings at 20 minutes per day for three days for each woman per month—equivalent to an hour of missed work, valued at the average hourly wage. This benefit equated to 4 percent of the total benefits at Company A.

6.3.1 BENEFIT: COST RATIO

Over 10 months, the base-case benefit cost ratio (BCR) was 0.54 at Company A and 1.97 at Company B. This discrepancy is explained by the substantially lower costs at Company B due to delays in implementing the infrastructure improvements. In the optimistic scenario, including all hypothesized benefits, the team calculated a BCR of 0.92 at Company A and 3.49 at Company B. BCRs in the conservative scenario were 0.52 at Company A and 1.80 at Company B.

Over 24 months, the base-case BCRs were 1.14 and 2.91 at Company A and Company B respectively. These increased in the optimistic scenario to 1.96 and 5.16 at Company A and Company B, respectively. In the conservative scenario, the same figures were 1.11 and 2.65.

Table 34. BCRs for workplaces in Nepal by scenario and timeframe

Workplace & Timeframe	Base Case Scenario	Optimistic Scenario	Conservative Scenario
Company A: Intervention Period	0.54	0.92	0.52
Company A: 24-month Period	1.14	1.96	1.11
Company B: Intervention Period	1.97	3.49	1.80
Company B: 24-month Period	2.91	5.16	2.65

6.3.2 BREAK-EVEN ANALYSIS FOR CONSERVATIVE SCENARIO

To break even over 10 months, the value of women’s economic benefits would need to increase by ~20% at Company A, to \$9.61 per woman. There was no break-even analysis for Company B, which even in the conservative scenarios had a BCR>1. To a large extent, the difference in the break-even analysis reflects the substantially higher costs of infrastructure improvements at Company A and the lack of infrastructure improvements at Company B. If the costs and benefits between the two workplaces is averaged, the break-even value for women’s economic benefits is \$4.83. These results suggest that, on average, future interventions would break even with women’s economic benefits priced at ~40 percent lower than the values the woman’s team.

6.4 RESULTS FROM WORKPLACES IN KENYA

The total costs of the *MHM in the Workplace* interventions in Kenya were \$5,055 at Company A and \$12,629 at Company B. Over the course of a 10-month intervention period, the respective costs per woman employee were \$62 and \$51.

At both workplaces, provision of menstrual materials was the largest portion of costs: 44 percent at Company A and 84 percent at Company B. Over 10 months, menstrual cups represent the largest cost borne by workplaces: 18 percent of total costs at Company A and 37 percent of total costs at Company B. Because menstrual cups are a one-time, upfront cost, if costs are projected two years, their proportion of total costs decreases to 12 percent and 29 percent respectively. Over 10 months, disposable pads were the second largest materials cost: 15 percent and 18 percent of total costs at Company A and Company B, respectively. As the only recurring materials cost, disposable pads increase to 23 percent and 34 percent of total costs at 24 months.

The costs of updating infrastructure showed the widest range: at Company A, they totaled \$1475, 29 percent of total costs, compared to just \$113 at Company B, or just 1 percent of total costs. Unlike menstrual materials, which were paid for by the project, large infrastructure upgrades were voluntary and borne by the partner companies. The small costs incurred at Company B were provided by the project and were meant to upgrade latrine stalls to be more female-friendly: shelves, hooks, and soap dispensers. Company B chose not to make recommended infrastructure upgrades.

Labor costs were 27 percent and 15 percent of total costs at Company A and Company B respectively; the largest proportion of these costs was the labor required to implement the program (i.e., workers

who facilitated sessions, handed out monthly pads, etc.). Labor costs of employee’s involvement represented a very small percentage (3 percent of total costs at each workplace).⁹

Table 35. Benefit and cost data for Kenya, by component and timeframe

Time Period	Workplace	Total benefits				Total costs			
		Benefit value (\$USD)	Percent Reduced absences	Percent Reduced healthcare costs	Percent Women's Economic Benefits	Value (\$USD)	Percent Materials	Percent Infra-structure	Percent Labor
10- Months	Company A	7886	11	7	82	5055	44	29	27
	Company B	27944	2	26	71	12629	84	1	15
24- Months	Company A	18375	11	7	82	7768	42	35	23
	Company B	62415	2	23	75	16025	86	1	13

The total benefits of the intervention were \$7,886 at Company A and \$27,944 at Company B. Over two-thirds of benefits were derived from women’s economic benefits—the value that women placed on both the tangible and intangible benefits of the intervention in the WTP survey.

Reduced absences comprised the second largest benefit at Company A—at 11 percent of the total estimated benefits. At baseline, women at Company A missed on average 1.8 hours per month for menstruation-related reasons. At endline, these absences were nearly eliminated. At Company B, reduced absences comprised only 2 percent of total benefits.¹⁰

Healthcare costs due to menstruation related illness comprised 7 percent and 26 percent of total benefits at Company A and Company B respectively. Even after the removal of outlier data from highly expensive treatments incurred for menstruation related illness, Company B’s average reduced healthcare costs amounted to a savings of \$2.95 per woman, per month. The team did not explore costs incurred for menstruation-related treatment further. However, in FGDs, women noted that any absences due to menstruation required a doctor’s note, whether or not they sought care. The reported cost of obtaining this note was ~\$2.

6.4.1 BENEFIT: COST RATIO (BCR)

The team calculated three BCRs: a base-case scenario, which includes in the benefits calculation women’s economic benefits and reduced absences; an optimistic scenario, which includes women’s economic benefits, reduced absences, and reduced healthcare costs; and a conservative scenario, which includes as benefits only reduced absences and reduced health-care costs (Table 38). The team excluded women’s reduced healthcare costs in the base-case because women’s economic benefits, derived from the WTP survey, theoretically encompass women’s expected reduction in healthcare costs and are therefore double-counted. However, because the WTP survey did not mention health benefits and

⁹ Due to management’s concerns over interrupting factory floor operations, a number of planned activities at both factories occurred during employee lunch breaks, and thus were not included in the total costs of the program.

¹⁰ We attempted to collect company records of absences during data collection. Absences provided by Company A were incomplete, while Company B was unwilling to share any data. There are also several policies at Company B that may discourage women taking any leave due to menstruation, discourage them from reporting those absences, or both. For example, Company B requires women to obtain gate pass cards to ensure they don’t “overstay” time in the toilets. In general, women at Company B expressed substantial anxiety over missing work.

because the team was unsure whether respondents factored in reductions in healthcare expenses to their answers, this report presents an “optimistic” scenario which includes both. The BCRs under each scenario are presented in Table 36 below.

Table 36. Descriptions of BCR scenarios

Base-Case Scenario	Reduced Absences + Women’s Economic Benefits / Total Costs
Optimistic Scenario	Reduced Absences + Women’s Economic Benefits + Reduced Healthcare Expenses / Total Costs
Conservative Scenario	Reduced Absences + Reduced Healthcare Expenses / Total Costs

In the base-case scenario, the BCR was 1.45 at Kenya Company A and 2.22 at Kenya Company B. The team calculated BCRs for 24 months by projecting costs for disposable pads, all recurring costs (e.g., soap or solid waste disposal), and a hypothetical 1-hour “re-sensitization session.” This assumes benefits would remain equal. All costs and benefits were discounted by 5 percent. The base-case BCRs over 24-months were 2.19 at Company A and 2.99 at Company B.

In the optimistic scenario, the BCR was 1.56 at Company A and 2.22 at Company B. The 24-month BCRs were 2.37 and 4.07 at Company A and Company B, respectively. In the conservative scenario, excluding women’s economic benefits, the respective BCRs for Company A and Company B were 0.28 and 0.63 for the 10-month intervention. Over 24 months, the BCR at Company A increases to 0.42 and breaks even at Company B, at 1.16.

Table 37. BCRs for workplaces in Kenya by scenario and timeframe

Workplace & Timeframe	Base Case Scenario	Optimistic Scenario	Conservative Scenario
Company A: Intervention Period	1.45	1.56	0.28
Company A: 24-month Period	2.19	2.37	0.42
Company B: Intervention Period	2.22	2.22	0.63
Company B: 24-month Period	2.99	4.07	1.16

6.4.2 BREAK-EVEN ANALYSIS FOR A CONSERVATIVE SCENARIO

The team conducted a break-even analysis to determine at what value of women’s economic benefits the intervention would produce a BCR of 1.0 over 10 months. At Company A, the gap between benefits and costs without women’s economic benefits was \$3,659 over 10 months. At 81 women employed, the average willingness to pay to achieve a BCR of 1.0 was \$4.50 – substantially less than the \$8 used. At Company B, the gap between benefits without women’s economic benefits was \$4,636. At an average of 250 women employed, the equivalent willingness to pay value was \$1.85. These results suggest that even if future analyses found WTP values considerably lower than the average used, the intervention is still very likely to break even.

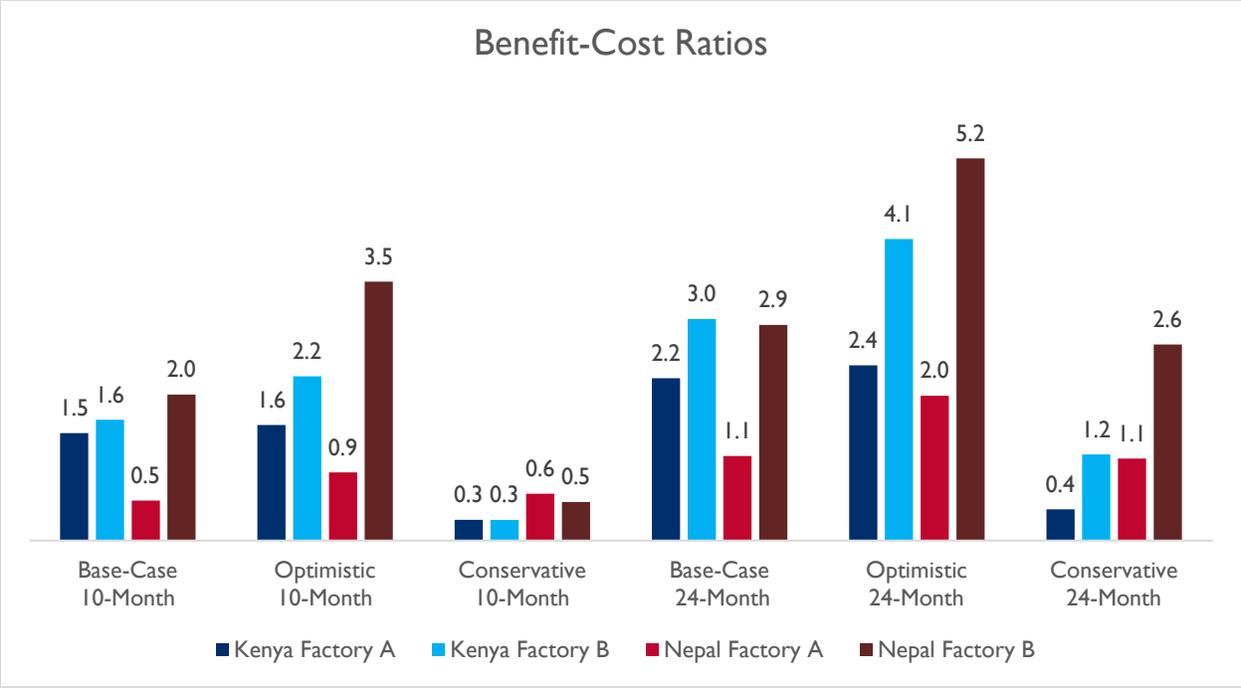


Figure 36. BCRs for workplaces in Nepal and Kenya

6.5 FINDINGS ACROSS ALL WORKPLACES

6.5.1 BENEFIT-COST RATIOS

Base-Case: The average BCR across all four workplaces over 10-months in the base case was 1.40, ranging from 0.54 (Nepal Company A) to 1.97 (Nepal Company B). Over 24-months, the average BCR across workplaces was 2.31. The BCR increases with decreased proportional costs, as disposable pads and infrastructure maintenance (e.g., cleaning and emptying) represent the only recurring costs. In short, on average, the benefits of improving MHM in the workplace are valued at over double the costs.

Optimistic Case: The average BCR across all four workplaces for the 10-month intervention was 2.05, ranging from 0.92 (Nepal Company A) to 3.49 (Nepal Company B). If the intervention continued for 24-months, the team projects the average BCR to be 3.39 – or more than triple the original investment.

Conservative Scenario: The team also projected conservative scenarios, excluding women’s economic benefits from the WTP survey. The average BCR over 10 months was 0.81, while the average BCR over 24 months was 1.33. In other words, over 24 months, the value of reduced absences, healthcare expenditures, and time savings alone are valued 33% higher than the costs of MHM improvements.

Table 38. Four-site average BCR, by scenario and timeframe

Timeframe	Base Case Scenario	Optimistic Scenario	Conservative Scenario
Intervention Period	1.4	2.05	0.81
24-month Period	2.31	3.39	1.33

6.6 DISCUSSION

The benefits of providing adequate MHH outweigh the costs, but more work is necessary to increase funding and support for MHH in the workplace: This study represented one of the very first cost-benefit analyses of providing improved MHM in a workplace setting. On average, the benefits of providing menstrual materials and creating a more supportive environment for MHH were valued at 1.4 times the cost over a 10-month period and over double the costs over a 24-month period. We did not project benefits beyond two years, but it is highly likely that benefits would increase relative to costs, as we assumed that infrastructure improvements last beyond two years.

An important question was whether the net positive benefits justify increased funding on the part of businesses or governments. In 2018, per capita healthcare spending was \$88.39 in Kenya and \$57.85 in Nepal, of which domestic government health expenditures as a percentage of per capita health expenditures were 42% (\$37.25) and 25% (\$14.49) in Nepal (World Bank, 2022). The cost of menstrual materials in our program (if extended to 12 months) ranged from \$33.12 (Kenya Company A) to \$59.65 (Nepal Company A) per capita. Viewed in this light, although our analyses suggests economic benefits from implementing programs for improved MHM, it is highly unlikely that governments could reasonably fund MHH programs when weighed against competing health priorities at the national level. However, governments and businesses could explore public-private partnerships in which costs are shared.

Calculating return-on-investment for workplaces is important for making a stronger business case for improved MHH: In our initial plan, we expected to conduct a return-on-investment (ROI) analysis to examine whether the benefits accruing directly to the company (rather than to women or to society) would outweigh the costs. Because of the inadequacy or unavailability of data, we were unable to determine the extent to which the intervention improved the company's bottom line. Given the positive results of the activity, we expect there to be greater interest in replicating workplace MHH interventions in different contexts.

Further research is needed to more directly answer whether improving MHH in the workplace leads to increased productivity for factories, which will help make the case for business investment in MHH. While we were unable to conduct an analysis of ROI for factories in particular, several pieces of evidence suggested that returns to the factory could be considerable. For example, supervisors in Kenya factories noted a marked improvement in the efficiency of production lines, which they attributed to the intervention. We also expected that the reduction in absences and reduction healthcare expenses (as a proxy for women's health more generally) would likely increase factory productivity.

Menstrual materials and changes to workplace culture appear to be strong drivers of benefits: At Workplace B in Nepal, proposed improvements to the latrines were not completed until the end of the project in October of 2021. As a result, we were able to compare the benefits at Company A, which made substantial improvements to infrastructure, including building a new latrine, and Workplace B, which only provided menstrual materials during the intervention period. The benefits between the two factories were similar, with moderate reductions in absences equal to \$934 (11% of total benefits) at Nepal Company A and \$764 (8% of total benefits) at Nepal Company B, and substantial reductions in healthcare related expenses, equivalent to \$3,449 at Company A (42% of total benefits) and \$4,311 (44% of total benefits) at Company B.

While it is not possible to conclusively state whether any components of the intervention in isolation were more responsible for reducing absences and healthcare costs, these data suggest that menstrual materials alone have a substantial impact on women's absences from work and on menstruation related healthcare expenditures. These results suggest that future interventions, if unable to scale infrastructure improvements, may still benefit markedly from the provision of menstrual materials.

Benefits could be increased if menstrual material costs are decreased: Menstrual products and supplies were the largest cost at all workplaces, except for Nepal Company A (where infrastructure costs totaled \$6,271). At both Kenya workplaces, menstrual cups, at roughly ~\$10 a piece, were the largest product cost over the course of the intervention. The benefit-cost ratios increased over a 2 year projection partly because of the one-time up-front cost of cups; however, endline surveys showed that only a fraction of women used and preferred cups. When the cost of cups was removed, the BCRs at both Kenyan workplaces increased from 1.56 to 1.90 and 2.22 to 3.51. In the conservative scenario excluding women's economic benefits, respective BCRs increased from 0.28 to 0.34 and 0.63 to 1.0.

Although the provision of menstrual cups likely had some impact on reduced absences and reduced healthcare expenses in the Kenya workplaces, the smaller proportion of women using them suggested that the costs of a *MHM in the Workplace* intervention could be reduced (by not providing cups), with similar results in benefits. These results ran somewhat contrary to the CBA conducted by Babagoli et al. in Western Kenya (Babagoli et al., 2020), in which menstrual cups were more cost-effective than disposable pads, given that over a longer time period menstrual cups are less expensive. The trade-offs between acceptability of disposable pads compared to menstrual cups and their long-term cost effectiveness are an area of study for future CBAs within the menstrual health and hygiene (MHH) space.

Healthcare Expenditures: A somewhat unexpected finding of the intervention was the substantial cost incurred, on average, for menstruation-related healthcare. While the vast majority (>80 percent) of women did not incur any costs seeking menstruation-related healthcare, many paid very high costs relative to monthly salaries. These costs were particularly high in Nepal, where the average monthly cost at baseline was more than 1400 NPR—equivalent to 8 percent of the average monthly salary.

The average reduction in healthcare costs was 78 percent across all workplaces. While the team did not probe health outcomes in depth at endline, these reductions likely came from decreased reproductive tract infections. This finding also ran counter to Babagoli et al.'s CBA of providing menstrual materials to Kenyan school girls (Babagoli et al., 2020). In that analysis, the significant difference in health outcomes was a lower rate of sexually transmitted infections among girls who received pads or cups, while there was no difference in RTIs between those provided menstrual materials and the control groups. This finding warrants future research, as information on the health impacts of inadequate MHM in workplace settings in developing contexts remains sparse (Hennegan et al., 2019).

6.7 LEARNINGS AND LIMITATIONS

Financial indicators vary by business sector and component of production, complicating the collection of data for CBA. Collecting private sector financial data proved particularly challenging since costs were heterogeneous and context specific. Bookkeeping was often particular to the products being produced and wasn't standardized across workplaces. For example, in Nepal Company A, because workers lived on the premises and could return to the loom to make up any time they lost due to menstruation, absenteeism was difficult to quantify. Women could adjust their hours or make up work hours if they needed to take a long break due to menstrual pain. We applied a human-

capital approach and valued self-reported absences at women's average hourly salary, but these metrics are also subject to the standard limitations around self-reported data.

At each workplace, departments measured productivity differently. For example, while carpet-making companies measured productivity by square inch of carpet produced, workplaces in Kenya measured productivity through somewhat subjective supervisor assessments. Many of these metrics are considered proprietary, which—compounded with challenges of data-collection due to COVID-19—ultimately resulted in companies being unwilling to provide more detailed data that the project could use to compare productivity pre- and post-intervention.

CBA data is challenging to obtain from non-multinational companies. The team found that independent private sector companies created their own customized business data collection tools and processes. Since these were not standardized, data was frequently misreported or missing, providing an incomplete picture and hampering analysis and results.

Some doubts remain about the validity of WTP methodology in a workplace setting. Across all worksites where the team conducted a WTP survey, women were willing to pay for an MHM intervention in amounts that were unexpectedly high—up to 20 percent of current salaries. Multiple biases may have distorted these figures, chiefly a desirability bias due to the survey being delivered in the workplace by researchers affiliated with the program. Given the precariousness of employment during COVID-19, when many workers across the world became unemployed, women may have been more sensitive to choose response options that reflected their current workplace. Workers also may have been more likely to be “yea-sayers”—acquiescing to lower salaries—in the hopes that the provision of pads might continue at the workplace. As stated in the methods section, we applied adjustments to the large WTP survey sample collected in Tanzania, but note areas for improvement in WTP methods surrounding menstruation at the workplace.

6.8 CONCLUSIONS

This study represented one of the first cost-benefit analyses of providing improved MHM in a workplace setting. The team estimated that, on average, the benefits of providing menstrual materials and creating a more enabling environment for MHM were valued at over double the costs for a 10-month period.

While the project was unable to conduct an analysis of return-on-investment for workplaces in particular, several pieces of evidence suggested returns to the company may be considerable. For example, supervisors in Kenyan workplaces noted a marked improvement in the efficiency of production lines, which they attributed to the intervention. The team expected that the reduction in absences and healthcare expenses (a proxy for general women's health) would likely increase workplace productivity.

This study pointed to several areas for future study. Replication of a similar intervention over a longer period time at a workplace with more detailed productivity records will provide more definitive evidence on whether an economic case can be made for the private sector to facilitate MHM at work. This would also help to better quantify changes in absences as a result of an improved environment for MHM. Women's valuation of the tangible and intangible benefits of improved MHM, measured via willingness to pay, represented another unexplored avenue of research. These results suggested that women's valuation of improved MHM is considerable, >5 percent of a woman's monthly salary in this study. This finding warrants replication, and future research may endeavor to better differentiate how employees value various aspects of the intervention, e.g., the relative weight of providing menstrual pads vs. the intangible benefits of a more supportive and less stigmatizing environment.

7.0 METRICS DEVELOPMENT & INDICATORS FIELD TESTING

The academic and practitioner fields lack established indicators for measuring the interaction of MHM, women's participation in the labor force and their economic empowerment. To help address this need, WASHPaLS supported field testing of MHM indicators that are currently under development by relevant and active academic institutions. The activity began with a brief landscape exercise to understand current advances in MHM indicator development, identifying those which are readily adaptable to workplace MHM and best positioned for field testing during the life of this activity. Based on findings of the landscaping exercise, and in consultation with USAID, Tetra Tech issued a subcontract to Athena Infonomics and Emory University to pursue refinement and field testing of the indicators. Findings from their study are presented in a standalone report (USAID, 2021) with excerpts from the executive summary below:

Through a review of existing documents and tools related to menstruation and WASH monitoring as well as rigorous testing and large-scale survey deployment, we identified 21 potential indicators for monitoring menstruation related to work. This includes 12 indicators for determinants (eight at the workplace level and four at the individual level), five for work menstruation experiences, and four for individual well-being and employment outcomes. Section 4 of the report provides a detailed overview of the proposed indicators, including how each proposed indicator was identified, how it is measured, and what previous work informed the indicator identification and measurement. To validate the set of measures used to assess the proposed indicators, we undertook a multi-step process to adapt or develop and then test items with over 1000 women who recently experienced menstruation while working outside the home in two different contexts: Kathmandu, Nepal and Nairobi, Kenya. Section 3 of the report details our approach.

The indicator list has several strengths, most notably:

- We **leveraged previous indicator work** that has identified or proposed indicators related to menstruation, either in different contexts (e.g., schools) or among different populations (e.g., girls) in order to maintain alignment with current initiatives that have also generated broad consensus about what to monitor.
- The indicators included are **informed by a conceptual model** (see Figure 37) that demonstrates how determinants at various levels influence menstruation experiences while working outside the home, which may in turn impact individual well-being and employment-related outcomes. Using the conceptual model to guide indicator selection assures that the indicators proposed are comprehensive of menstrual health and work. A detailed description of the conceptual model—the determinants, experience and the outcomes related to menstruation and work—is provided in Section 2 of the report.

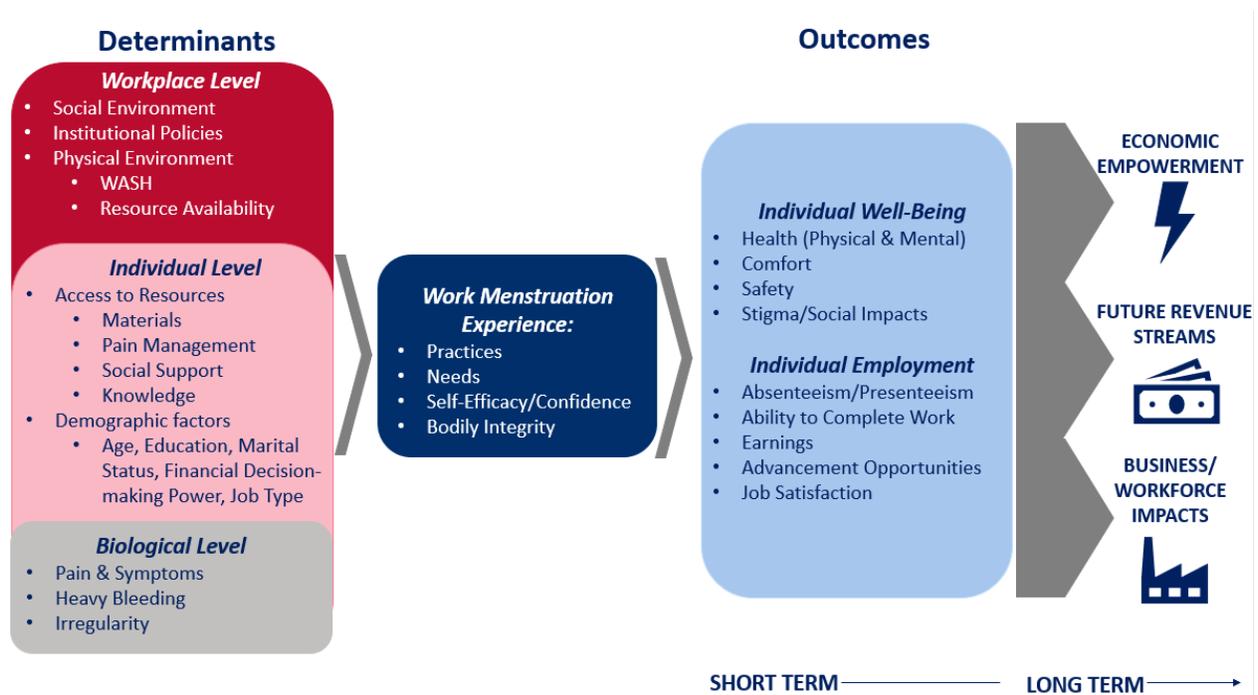


Figure 37. Conceptual Model

- We intentionally **adapted or developed all indicators and measures for assessment at the individual level**. Other monitoring efforts include assessments of institutions (e.g., schools, healthcare facilities). However, systems for assessing workplaces are not widely established. Therefore, we modified and tested items that would typically be assessed at the institution (workplace) level so they could be used in assessment of individuals. This modification will allow for information about workplaces and also facilitate uptake into existing survey systems.
- We **randomly sampled participants** to allow us to engage and test the items with a diverse population that represents a range of job types. The 21 proposed indicators reflect each part of the research team’s guiding conceptual model, from determinants to experiences and outcomes.
- The indicator list serves as an **important first step to enable monitoring of menstrual health related to work**. The indicator list requires further external review by experts and relevant stakeholders to identify gaps, priorities, and next steps for monitoring menstrual health related to work. The measures and indicators also need additional testing over time. These current data reflect very specific populations during a very specific (COVID-influenced) time.

In addition to the proposed set of indicators, each step of our approach has yielded worthwhile outputs that can serve future research and practice. Specifically, the **rapid literature review** allowed us to expand upon both the previous literature review and upon the conceptual model depicting links between menstrual health in the workplace and women’s economic empowerment and business outcomes developed by Iris Group, as part of the USAID WASHPaLS project. The **expanded conceptual model** guided the research team’s own tool review, adaptation, and development process, and can be used to guide future research and programs. The team’s intentional engagement with varied stakeholders resulted in **an extensive, validated final survey tool**, which assesses far more than what was used for assessing the indicators. The items in the final survey tool were vetted by working women and partners in each location, as well as experts in menstrual health and development. The final

survey tool can be used with other populations, and our processes of refining the tool can be leveraged to refine it with other populations. Deploying the final tool at scale in two locations generated a rich **dataset** about menstrual health and work at all points along our expanded conceptual model. Further analysis should be undertaken.

And finally, the rich information about menstrual health and work generated in the process of identifying and testing indicators and measures is the most comprehensive assessment of menstrual health and work to date. Across almost all measures—including determinants at the workplace and individual levels, work menstruation experiences, and health and employment-related outcomes—participants in Nepal appear to fare better than participants in Kenya. Notably, a greater proportion of participants in Kenya than in Nepal did not feel completely confident working during menstruation or managing menstruation outside the home, and reported that concerns about safety prevented them (at least some of the time) from changing materials as needed. A greater proportion of Nepali participants also reported being satisfied with their ability to meet their menstrual needs while at their job. Additional insights are provided in the report, which includes data on close to 200 items.

8.0 IMPLEMENTATION LESSONS LEARNED

The following lessons highlight process learnings focused on how the MHM in the Workplace intervention was carried out.

8.1 WORKING WITH THE PRIVATE SECTOR

Business priorities compete with employee-focused investments and can override research implementation efforts. The MHM in the Workplace intervention was implemented in four private sector companies. By signing partnership agreements, the project set the following expectations for partner companies: that the companies allow the research teams access to their staff for pre- and post-intervention data collection and for limited education and sensitization sessions (1 hour per month) for the duration of the intervention. In return, WASHPaLS agreed to limit on-site activities and minimize interruptions to work flow, communicate regularly with leadership about the intervention sessions and learnings, provide basic MHM education and sensitization to staff, and distribute free menstrual products on a monthly basis. WASHPaLS fully recognized that the research team's presence at the workplaces was at the invitation of the company leadership. Throughout the intervention, the private sector companies' top priorities remained profit-focused, so the research teams were committed to keeping disruptions to a minimum and implementing activities along the parameters set by the partnership agreement. As the intervention implementation rolled out, the allotted time for in-factory research activities competed with profit-driven workflow and production activities. Despite the stipulations made in the partnership agreements, in three of the four workplaces, owners and leadership requested that the research teams further decrease their in-person engagements.

Toilet infrastructure improvements was another point of contention between business priorities and employee-focused social impact. As part of the partnership, *MHM in the Workplace* made infrastructure upgrade recommendations to bring toilet facilities up to international MHM standards. While WASHPaLS agreed to provide basic infrastructure improvements (e.g., soap (Nepal), soap dispensers (Kenya), hand dryers, hooks on doors, etc.), the companies were responsible for large infrastructure upgrades. One company in each country carried out large-scale investments, while the remaining two companies did not complete the upgrades during the intervention period. The inability to carry out these upgrades illustrates the schism between employee-focused investments and other corporate priorities.

Minimize workplace disruptions: remain flexible and limit in-person engagement of company staff. To respect partner companies' ultimate business goals and their wish for minimal interruptions, WASHPaLS designed "light touch" in-person interventions for all four workplaces. The research teams departed from well-established evidence-based conventions for public health interventions that rely on multiple and repeated exposure to health messages for participants. Established approaches frequently offer individual and group in-person reflection points to bring about attitude and behavior change. In three of the four workplaces, even the monthly one-hour sessions were further truncated at the request of the leadership teams. For example, the monthly education sessions in Nepal workplaces were reduced to 30 minutes. At Company B in Kenya, it became apparent that the company preferred menstruating employees to meet with the research team during employees' lunch period only. After extensive troubleshooting, WASHPaLS realized that in-person education and sensitization sessions facilitated by the research team at Company B was not feasible. As a result, the

research team commissioned MHM champions to support all menstruating employees as best they could.

Establish and maintain trust with workplace leadership. Given limited leverage points for the research team in accessing the workplace and its workers, success of the intervention hinged on the team's ability to develop and sustain a trusting relationship with the companies' leadership. The research team was clear in communicating with leadership about every intervention component, established leadership points of contact for each workplace, communicated regularly through focused phone conversations with leadership, ensured agreement on every in-person engagement (including date, time, location, etc.), and provided strategic updates of progress.

Be flexible and always accommodate workplace needs. Collaboration with the private sector meant that the research team needed to compromise and sometimes pivot from agreed upon intervention-related plans. For example, when the partner workplaces received large orders that needed to be filled in a time-sensitive manner, workers could not be pulled away from their workstations, forcing planned intervention sessions to be rescheduled. Similarly, endline data collection at both workplaces in Nepal were scheduled right before a major holiday. Workers themselves prioritized continuing production rather than participating in research activities to avoid losing wages, and the research team had to accommodate the change. The CBA team was also forced to modify their data collection plan; after encountering resistance from company leadership on sharing sensitive information such as revenue data, the team re-designed data collection tools to collect the minimal required information, relying in some cases on data from the women's surveys (e.g., absences) instead of figures provided by the workplaces.

Build on existing workplace roles and structures. Given limited access to staff at the partner companies, the research teams identified existing staff at the workplaces that could facilitate implementation. In Kenya, where partner companies employed either a nurse or first aid provider on site, the team worked closely with them to increase their knowledge about and comfort with MHM issues. Specific BCC content was developed for the nurse and first aid provider to better articulate how they could support on MHM in the workplace, and to help guide their support of menstruating employees.

Build coalitions and networks to advance sustainability goals. Recognizing that the MHM in the Workplace action research involved a short but intense period of engagement along with the provision of free menstrual products, the research teams prioritized sustainability-building from the start. Both country teams established relationships with sustainability partners that were vested in MHH, could provide on-going practical technical guidance to the project, and could continue to promote similar efforts in workplaces or through policy and advocacy post-activity.

The Nepal team built a working relationship with key advisors who work on MHH in-country and regionally. The Nepal Advisory Committee included individuals from Nepal CRS Company, Federation of Women Entrepreneurs Association of Nepal, Kathmandu University School of Medical Sciences, MHM Partners Alliance of Nepal, and the Bill and Melinda Gates Foundation, all entities with a track record of working on MHH. The team engaged these advisors on an on-going basis to get their insider knowledge about MHH, connect the dots more strategically about existing and emerging initiatives, and build networks of collaboration for future efforts. In addition, the team worked with various host government entities, including the Ministry of Health, Ministry of Water Supply, and the National Planning Commission in charge of MHM, to gain their support of the project. The team sought and

received Government of Nepal approval on the BCC materials, facilitating the process of utilizing these products by future government-endorsed projects. A significant feat for the project involved working closely with the MHM Partners Alliance of Nepal to officially endorse MHM in the workplace as the third pillar of its strategy on MHM, along with efforts in schools and at the community level. By formally naming MHM in the workplace as a priority, the project opened the door for continued work and future investments in the long run. The team also made inroads with the International Labor Organization of Nepal via Federation of Women Entrepreneurs Association of Nepal in order to include MHM language in workplace health and safety guidelines. Finally, the team worked throughout the duration of the research to grow a list of stakeholders who are committed to taking up or supporting future MHM in the workplace efforts. These sustainability partners participated in a half day workshop where the team introduced them to the components of the intervention as well as the project's BCC tools and methods. The workshop also provided guidance on how to adapt the BCC products and contextualize them for new audiences.

In Kenya, the team launched an advisory committee at the start of the project, comprised of professionals with expertise in MHH policy, programming, social and behavior change, menstrual products development and education, media and advocacy, and medicine. The advisory committee met bi-monthly to share updates on the research activities, provide feedback and guidance, and explore specific technical areas of work on MHM such as male engagement, linkages with national policy, and menstrual health complications. In addition to bi-monthly meetings, the research team established a WhatsApp group that included all members of the advisory committee to facilitate routine communication about the WASHPaLS activity, as well as MHH trends and research in Kenya and abroad. By virtue of meeting regularly, members of the advisory committee developed professional relationships that set the stage for future collaboration and sustainability of MHH in Kenya.

8.2 THE ROLE OF CORPORATE CULTURE AND LEADERSHIP PRACTICES IN SUPPORTING MHM

The four private sector partners varied in their corporate structure, business values, and management and leadership practices. Company A and Company B in Nepal and Company A in Kenya were family-owned businesses, while Company B in Kenya was part of the export processing zone. Although all four companies prioritized productivity and profit, there was variability in how each workplace considered employee wellness and working conditions relative to corporate goals. The two companies in Nepal, smaller in size, operated as close-knit workplaces that also offered onsite housing to its employees. One of those companies also paid for the schooling of employees' children, and thus supported multi-generations of staff. At Company A in Kenya, which is a woman-owned business, the head of the company explicitly articulated her desire to make the company a place where women employees can grow and thrive. This corporate commitment to the wellbeing of the workforce is undoubtedly a condition to enabling MHM.

Corporate leadership and management set the tone for the value of MHM. Top leadership's perception of their company's workforce, their interest in employees' lives outside the workplace, and their capacity to empathize with the employees' experiences, can create a corporate culture that is not only respectful and supportive of staff in general, but conducive to MHM issues specifically. Such values can trickle down to staff in supervisory positions and shape management practices that motivate productivity in a non-punitive manner. In the absence of national laws and regulations that articulate a range of worker-centered rights and protections, internal workplace culture can go a long way toward

supportive treatment of employees, including recognition of menstrual health as a condition for improved workforce performance and well-being.

8.3 ACTION RESEARCH IN THE TIME OF COVID-19

COVID-19 created significant challenges to the MHM in the Workplace action research, from recruitment to implementation.

The challenge of recruitment. COVID-19 posed a challenge to recruiting private sector partners into the action research. The research team identified Company A in Nepal and Company A in Kenya as partner companies during scoping trips that were held prior to the COVID-19 outbreak. However, the search for two additional partner companies occurred after the global pandemic reached Nepal and Kenya, making it much harder to find partners who were willing to partake in research activities at a time when routine life was profoundly upended. As the economies in each country became more unstable due to COVID-19, it was particularly difficult to convince new private sector entities of the potential value-add in the research partnership. WASHPaLS utilized internal contacts, such as colleagues at the USAID Missions, members of the advisory committees, and leadership at Company A in both countries, to reach out to potential businesses. These trusted points of contact helped the team identify and eventually recruit other companies in both countries (Nepal Company B, Kenya Company B) as additional partner worksites.

Implementation of risk mitigation plans. The Nepal and Kenya research teams developed detailed risk mitigation plans in close alignment with country-specific Ministry of Health requirements. Implementation of these plans had cost and time implications for the project. For example, research staff underwent PCR testing or rapid antigen testing prior to monthly in-person visits to the worksites. If research staff had personal travel away from the Kathmandu Valley or Nairobi, they had to postpone their in-person engagement at the workplaces in accordance with local quarantine requirements and needed to demonstrate a negative COVID-19 test result before they could rejoin on-site activities. Research staff in Nepal wore full personal protective equipment every time they entered the factory sites, while Kenya research staff wore masks. Social distancing requirements entailed additional costs in Kenya, where the sheer size of the workforce of women participating in the intervention at Company B in Kenya meant duplication of launch sessions with smaller groups of employees. Risk mitigation also required additional planning and coordination among the research team and with the partner companies.

Changing COVID-19 restrictions required creativity and flexibility in research design and implementation. Research implementation plans needed to be adapted as the COVID-19 situation changed. In Nepal, where the pandemic infection rates fluctuated, the team could not carry out in-person baseline data collection at Company A. The team made contingency plans to implement individual quantitative data collection interviews virtually via Zoom Video Communications, and coordinate efforts with company leadership to carry out these sessions in a private space at the factory. This process was less efficient than having research staff present at the company in person, but it was a creative solution to a complex problem that ensured both safety of participants and data quality. In addition, the Government of Nepal issued a full lockdown during the implementation period of the action research, halting in-person education activities at both companies between April and June of 2021. Despite this disruption, the team continued to engage with company leadership on a regular basis, ensured ongoing distribution of disposable menstrual pads and collection of menstrual waste, and provided virtual sessions utilizing the edutainment videos created by the project. Once in-person activities resumed, the team revised the educational content from 60 minutes to 30-minute sessions and

negotiated with company leadership the ability to carry out two education sessions per month in order to cover all the topics as originally planned. Hence, no content was removed as a result of the lockdown.

Difficulties in collecting consistent and reliable CBA data due to economic instabilities created by COVID-19. The initial CBA plan assumed a comparison of financial data during the year of implementation with the previous year's data in order to attribute changes to the MHM intervention-related factors. However, all elements of production and sales were significantly affected by the pandemic. For example, costs of raw materials increased, demand for production orders changed, the supply chain was affected by temporary shut-downs, and so on. To accommodate this, the team planned to compare data from 2019 and 2021. However, this approach was impeded by the lack of accurate retrospective data, which companies either did not keep in accurate form, or, as previously noted, were unwilling to share. These factors made it impossible for the team to compare current year financial data with retrospective data for most variables, prompting an alternative approach to aspects of the CBA.

9.0 DISCUSSION AND RECOMMENDATIONS

The *MHM in the Workplace* action research demonstrated that improved workplace MHH is linked with women's empowerment. Several MHH factors had a positive effect on women's sense of wellbeing, anxiety, confidence, and voice/representation. Access to free, quality menstrual products in the workplace reduced women's anxiety about managing their periods and assuaged fears that they would leak blood, stain their clothes, and be ridiculed by coworkers. In addition, free products addressed period poverty, which a vast majority of women participants experienced, consequently alleviating broader economic hardship and worry. Improved toilet infrastructure, including access to functioning toilets, access to water, and waste disposal, allowed women more privacy and increased their confidence and sense of dignity in managing menstruation at work. Education efforts increased women's knowledge of menstruation and health, enhanced their ability to problem-solve, and increased their self-awareness. This also increased their ability to support one another, bringing about greater camaraderie and empathy among staff. The intervention's group sessions, use and dissemination of BCC materials, and sensitization sessions for managers and other staff in positions of power contributed to increased conversation about menstruation in the workplace, helping to normalize the issue and reducing menstrual stigma and shame. As the topic of menstruation became less taboo in the workplace, women were more likely to share their experiences, express their concerns, and articulate their needs, increasing the likelihood that their voices would be heard and represented within the company.

In addition, this study was one of the first cost-benefit analyses of improved MHM in a workplace setting. On average, the benefits of providing menstrual materials and creating a supportive environment for MHH were valued at 1.4 times the cost over a 10-month period. The upfront costs of the project – particularly infrastructure improvements and menstrual cups – are high, but with continuous benefits accrual, we projected the BCR to a hypothetical intervention delivered over two years. In this scenario, the benefits were valued at 2.3 times the cost. In other words, every dollar invested in improving MHH returned \$2.30 in benefits. We modeled benefits using an optimistic and conservative scenario. In the optimistic scenario, which included all hypothesized benefits, the average BCR was 2.1 over 10 months and 3.4 over 24 months. In the conservative scenario, which did not include women's economic benefits derived from the WTP survey, the average BCR was 0.8 over 10 months and 1.33 over 24 months. These final conservative figures suggested that over two years, the value of reduced absences and healthcare savings alone outweighed the cost of implementing the program. This finding begins to characterize productivity loss and healthcare costs of inadequate MHM, which remains an understudied topic in LMICs (Sommer et al., 2016). There were also some indications, though inconclusive, that the provision of menstrual materials had an outsized effect on benefits. In each country, one workplace invested more heavily in infrastructure upgrades, but benefits were relatively similar despite these differences. This suggests that the provision of materials was largely responsible for reduction in healthcare related expenses, while materials and improved workplace culture in concert were more heavily responsible for the reduction in absences than infrastructure improvements.

The ensuing discussion distills broad learnings from the *MHM in the Workplace* action research and highlights key recommendations for future intervention focused on MHH improvements in work settings. This section also explores important remaining gaps in knowledge and priorities for future research.

9.1 LESSONS LEARNED

1) **Inadequate MHH in the workplace is a manifestation of pervasive underlying inequality and sexism, requiring multi-sectoral, systems-wide solutions.**

In the course of the research, women employees described **challenges in managing their menstruation at work in ways that were linked with other manifestations of their lower status and limited autonomy**, as compared to their men counterparts. For example, several of the partner companies were more likely to hire women on a temporary/contractual basis, which rendered women ineligible to participate in workers' unions and which limited their representation in the corporate system. This status also meant that women employees were in a less favorable position to enjoy full benefits or ascend through promotions. However, it is important to note that in general, Nepal offers more equitable union benefits and protections that support daily wage and full-time employees' bargaining power. Such inequalities further affected women workers' MHM-related challenges since they could not advocate for better MHM conditions, and their lower salaries perpetuated period poverty.

The **experience of menstruation can also diminish women's chances of being treated as equals in the workplace**; when menstruating employees call in sick regularly or need to negotiate more frequent bathroom breaks, their performance will be viewed as inferior to that of men employees, and they are less likely to be valued or promoted. Workplace toilet infrastructure was also characterized by gender inequality: although the low ratio of toilets to workers was problematic for all employees, it was particularly difficult for menstruating employees. Thus, improvements in workplace MHM need to be viewed in the broader context of gender inequality.

Women's age and literacy contributes to MHM vulnerability in the workplace. Women employees at Nepal Company B and Kenya Company B were significantly younger than their counterparts (Nepal Company A and Kenya Company A). The workforce at Nepal Company B was particularly young, with many workers between 15–24 years of age (above the legal age of work in Nepal). These were primarily unmarried young women who dropped out of school or had no education and were sent off from their villages to work in the country's capital, Kathmandu. They had very low literacy and limited knowledge of menstruation or reproductive health more broadly. Most had never received any sexual health care and were very shy and timid about addressing menstrual health issues. The Nepal research team revised the intervention's curriculum content and format to meet the needs of this young female workforce. The research team simplified educational materials to address basic body literacy and held sessions in small groups of young women to provide an intimate and safe space for dialogue and learning. Similarly, the young cohort of women employees at Company B in Kenya demonstrated more limited knowledge of menstrual and reproductive health and had more questions about contraceptive-induced menstrual changes than their older counterparts. The research team utilized BCC materials that had less text to address limited literacy. This young workforce was also poorer and less likely to have smartphones at the time of employment as compared to Kenya Company A, which was a medium used by the project to disseminate some BCC messaging. In both Kenyan workplaces, these young women also had less work experience and lower status in the workplace, making it even harder for them to speak up in support of their MHM needs.

Intersecting inequalities compound poor MHM in the workplace. Workforce instability and turnover, lower wages, and low skill sets appeared to coincide with young age, low literacy, and higher vulnerability of women employees, further exacerbating women's difficulties to manage menstruation at

work. In addition to being younger and less literate, the workforce at Nepal Company B was newer to the workplace, held less sophisticated work skills, and earned lower salaries. Many employees had come from a rural area of Nepal that suffered devastating damage in the recent earthquakes, and others had returned from India due to COVID-19. This lower status of women employees translated into having less confidence in speaking out about their MHM issues.

In contrast, women employees at Nepal Company A were older, were accompanied by their families at the worksite, and had much longer tenures working at the company. The company invested in training and building workers' skills in carpet making, enabling them to earn higher salaries. Employment stability and loyalty appeared to be reciprocal between the company and its staff, and the technical expertise of these workers made them more valuable to the company. These conditions appeared linked to company leadership's willingness to support MHM improvements, and to workers' greater comfort with addressing MHM issues in the workplace.

The team observed similar dynamics in Kenya: employees at Company B experienced extensive turnover, while the workforce at Company A was more stable. Company B required less complex expertise of its workers, and hiring fluctuated significantly according to changing demands in production. Overall, a higher turnover suggests individual workers are replaceable without much cost and was associated with lower salaries, a harsher work environment, and more limited investments in workplace conditions and infrastructure. A stable workforce was linked to greater valuation of workers, higher salaries, greater company investments in working conditions such as toilet infrastructure, and more opportunities for professional mobility for women.

An MHM-friendly workplace culture is essential but insufficient for sustainable change. The intervention improved knowledge, reduced stigma, and increased dialogue about menstruation, and created a more favorable workplace environment for menstruating employees. An enabling environment for MHM is linked to a workplace culture that supports and respects women's well-being. An enabling environment is also based on the underlying belief that women and men employees have equal potential to contribute fully to production and corporate success. While a supportive workplace culture is key to positive MHM conditions, it must be anchored in systemic changes that strengthen women employees' standing. Broader structural supports such as equitable hiring practices, respectful supervision, access to sufficient working toilets, freedom to use toilets when needed, flexible work assignments with temporary reassignment of lighter loads, paid sick leave, transparent promotion processes, and other efforts are needed to promote a positive workplace environment for women and for MHM.

MHH requires a multi-sectoral response. MHH transcends WASH, SRH, mental health, gender equality and women's empowerment, workforce participation and economic growth, and business and organizational development. It encompasses sanitation, products, and infrastructure issues; access to health knowledge and services; stigma and isolation; unequal norms and expectations grounded in sexism and misogyny; workers' rights, representation, and voice (particularly for women); training and supervision skills; women's participation in the public sphere; promotion practices and advancement; and more. The action research in both countries demonstrated the technical complexity involved in improving menstrual wellbeing in the workplace. Each of these fields carries its own terminology, approaches, and specific desired outcomes. Because MHH does not fit squarely in any one of the sectors listed above it can be overlooked as an area of programming or is addressed in a stove-piped and disjointed manner instead of holistically.

RECOMMENDATIONS

Address MHH in the workplace in a holistic manner that considers improvements of MHH infrastructure and products, knowledge, and supportive attitudes alongside broader structural barriers related to gender equality.

Approach MHH as a multi-sectoral development challenge by expanding the intervention mandate and collaborating with experts from different fields.

2) MHH is intricately connected with sexual and reproductive health and is a gateway to relevant services.

The *MHM in the Workplace* action research promoted accurate understanding of the biological processes of menstruation in the context of reproductive life stages, from menarche to menopause. Education sessions and BCC materials focused on body literacy, proper use of a range of menstrual products, and stigma reduction. In all four workplaces, discussions on MHH opened the door for broader information needs and concerns about related sexual and reproductive health issues. For example, women shared questions about contraceptive-induced bleeding, medical conditions that cause bleeding complications such as uterine fibroids, spontaneous miscarriages, and sexually transmitted diseases. In many cases, menstruating employees reported having limited access to comprehensive reproductive health services. In workplaces that employed particularly young women or employees who had recently migrated from more rural areas, many had never consulted a medical provider about SRH issues and lacked information about where to access such care. The MHM activity offered a safe and readily-available source of support. However, given the specific mandate of the action research, the teams were limited in the information and services they could provide to women at the workplaces, resulting in important missed opportunities for health information and care.

RECOMMENDATION

Create explicit and intentional linkages between MHH and SRH, e.g., expand the intervention's theory of change, ensure co-funding with health resources, integrate SRH care in the workplace or implement systems for quality referrals, and measure both MHH and SRH outcomes.

3) Male engagement should happen on women's terms.

While the intervention's primary focus was on employees who menstruate, the research teams in both countries recognized from the start the important role that men in the workplaces play in reinforcing beliefs and practices around MHM. There also exist tremendous opportunities to improve MHM conditions with the support of these colleagues. Formative data collection in Kenya demonstrated that women at both workplaces were aware of men's influence on MHM-related social norms and behaviors but were concerned about whether and how to engage them. The research teams needed to prioritize menstruating employees' comfort and safety when planning and implementing male engagement activities.

In Nepal, women employees requested during formative research assessments that intervention activities should include men coworkers, but that engagement sessions should be carried out separately for them. Since employees lived in quarters on-site at both partner workplaces, some men employees were family members or relatives of the women workers. This fact and the otherwise close living and working conditions made it easier to engage men employees on MHM issues. At Nepal Company A, men lacked accurate knowledge about menstruation and body literacy more broadly, and they were eager to learn and better understand the issues affecting menstruating colleagues. Men at Nepal Company B were equally misinformed at the start of the project but they were generally younger, unmarried, and less literate, and they expressed great shyness and embarrassment about topics related to the physiology of menstruation. At both workplaces, the research team provided separate education sessions to men, which a male research advisor delivered to ease employees' comfort. These sessions facilitated conversation between women and men and resulted in greater empathy and support by men.

Formative research in Kenya revealed significant MHM-related misinformation and stigma among men and a range of concerns by women about engaging men in intervention efforts. Women at both workplaces talked about men at the workplace teasing and harassing women about menstruation. In addition, women employees felt the need to hide menstruation from men colleagues; they expressed pressure to prove that they could perform as equals. Women perceived opting for MHM-related accommodations as signs of weakness or as childish behavior.

In particular, women at Kenya Company A expressed significant hesitation about engaging men colleagues in MHM-related efforts. As a result, the team decided to postpone the male engagement component of the intervention until well into the intervention timeline, when women employees would have gained greater confidence speaking about and managing menstruation at work. Midway through the intervention, a select group of women employees co-designed (with the research team) and began carrying out the male engagement component of the intervention, agreeing that men's engagement would create a more open and less stigmatized environment around MHM at work. The research team followed the Appreciative Inquiry approach, a known organizational development methodology that seeks to engage stakeholders in self-determined change. Alongside women employees, the team jointly designed the male engagement approach and determined what areas of knowledge to emphasize with male staff. Guiding women at the company to determine the circumstances under which men could be brought into the MHM space was an empowering process that resulted in the development of a volunteer Menstrual Health Committee, comprised of both men and women employees.

RECOMMENDATION

Recognize when men's roles in MHH in the workplace may be unwelcome or harmful, and work with menstruating employees to define the timing and content for strategies to engage men colleagues as allies and supporters of an MHH-friendly environment.

4) Adults have inadequate MHH knowledge, which require customized BCC content and approaches.

An underlying assumption in the public health sector is that adolescents have the greatest need for accurate knowledge about menstruation and body literacy. By the time they reach adulthood and enter the workforce, they are expected to be well versed in these issues and able to manage menstrual health needs. This assumption fails to recognize that many in the workforce are not yet adults; that some may

have left a formal school setting early; that the education one received about menstrual health in adolescence may have been insufficient and inaccurate; and that menstrual health knowledge needs change throughout reproductive life stages. Indeed, this research demonstrated unequivocally that both women and men had limited knowledge on MHH. Women and men employees at all four workplaces expressed an eagerness to learn about MHH, and women specifically wanted a safe space to discuss their experiences and be able to ask questions. Addressing this taboo subject in the action research activities contributed to increased knowledge and helped break the culture of silence and shame around menstruation in the workplace.

Since most existing BCC materials on MHH are designed for pre-pubescent, adolescent, or young adult audiences, the teams in Kenya and Nepal worked with local graphic designers to develop BCC materials that were culturally contextual and age appropriate for working adults. Pictorial BCC materials depicted adult workers and phrased content to match interactions among adults. In addition, since BCC materials for working adults are most accessible when they match their specific workplace realities, the team developed visual BCC materials that depicted the realities at the respective workplaces. The set of materials developed for Nepal pictured MHH situations in the workplace or on the grounds where the workers lived, while the materials for Kenya illustrated MHH scenarios that closely matched the workers' uniforms and existing locations at the workplaces (e.g., nurse's room, toilet facilities, etc.). Furthermore, the teams created educational materials that addressed the specific literacy needs of these workers, recognizing the nuanced abilities of working adults. For example, women workers in the Nepal workplaces had very low literacy, hence the team designed MHH posters and playing cards with almost no text at all and pre-tested them to ensure clarity of messages. The Nepal team also created a three-part edutainment video for auditory and visual learning. In Kenya, BCC products contained simple language in both colloquial Swahili and English.

The mode of dissemination of BCC materials was also designed to suit adult working audiences. In Kenya, the team developed a set of simple graphic BCC messages that were disseminated on mobile phones to all menstruating employees via WhatsApp. Since use of WhatsApp was widespread, the team created a WhatsApp group to push out messages to women employees and then followed them up with simple questions to engage employees with text-based discussions and to motivate reflection on the content. This was an effective way to reach employees: providing brochures or hard copy materials would have been ineffective since the employees had no place to store items on the factory floor.

RECOMMENDATION

Customize BCC materials to the cultural context and in accordance with formative research findings to maximize appropriateness of content for adult workers.

5) Workplace-specific MHH operational policies benefit from broader national policy efforts.

The intervention included a review of existing workplace policies that had the potential to support MHH, the development of workplace-specific recommendations, and an offer of technical assistance to advance workplace MHH policy-related priorities. In Nepal, both partner workplaces had almost no existing policies to review or build upon. In the absence of MHH-related worksite operational policies, the companies relied on their own corporate values related to employee wellbeing. As such, efforts to integrate more transparent and robust internal MHH policies would likely need to come from national

mandates. Hence, the team worked closely with the MHM Partners Alliance of Nepal and collaborated with the National Planning Commission, International Labor Organization, and select government ministries to elevate MHM in the workplace as the third pillar of MHM (along with MHM in schools and in communities). The team also engaged with government counterparts, including the Ministry of Health, the National Planning Commission, Ministry of Water Supply, and Ministry of Industry, Commerce, and Supplies to keep them informed of the action research and ensure alignment with national efforts.

The workplace MHH policy review in Kenya yielded much more information than in Nepal. Kenya Company B had a range of existing policies, most of which built upon national mandates related to occupational health and worker safety and could benefit from recommendations to be more MHM-friendly. Though Kenya Company A's documented policies were few, they closely followed Kenya's Employment Act and Occupational Health and Safety Act, and they were open to technical assistance to curate additional written policies into their HR processes. The research team identified gaps in implementation, as well as opportunities to strengthen commitments that would enhance menstruating employees' wellbeing at work. In Kenya, the existence of a national MHM policy and other workplace safety policies created a framework which the two companies could build on to develop sustainable MHH-specific protections.

Overall, the policy reviews at all four workplaces demonstrated generally weak workplace policy structures specific to MHH and highlighted the need for better workplace regulations, including mechanisms for educating staff on their rights and obligations; implementation processes; and regular reporting/tracking of efforts. In both Nepal and Kenya, the policy reviews of the *MHM in the Workplace* action research highlighted the complementarity of national level policy mandates and their internal application within individual private sector companies in the form of operational policies. Multi-level policy efforts would be critical to improving women employees' capacity to perform to the best of their abilities in the workplace.

RECOMMENDATION

Support the development and implementation of sound public sector MHH policies, and reference them to enhance internal private sector operational policies.

6) Engaging local stakeholders and vendors brings valuable contextual knowledge to the activity and sets the stage for continued efforts post-intervention.

Wherever possible, the activity purchased and disseminated locally produced MHH products and services to support local businesses, empower their owners (who were often women), and facilitate sustainability. The Nepal team partnered with a local producer of disposable sanitary napkins, Jasmine Hygiene, that were 70 percent biodegradable, as well as a Nepali maker of reusable sanitary napkins. In addition, the team worked with a Nepali-registered NGO, Measures for Intervention Training Research and Action (MITRA) Samaj, to collect, remove, and safely dispose of used menstrual products.

In Kenya, the team also prioritized partnership with Kenyan enterprises. After market research, they activity partnered with a Kenyan producer of reusable menstrual pads, PadMad, as well as a Kenyan enterprise, ZanaAfrica, that designed and distributed Nia® disposable menstrual pads (manufactured in China). Partnering with local menstrual product businesses enabled the project to support locally registered, women-owned enterprises that had brand recognition in order to support a growing market.

In addition, these partnerships allowed the activity to work with entrepreneurs who understood contextual beliefs and practices around menstruation.

The activity offered Kenyan women employees menstrual cups in an effort to expand product choice. Through extensive consultations with global experts familiar with menstrual cup manufacturing, as well as with product availability in Kenya specifically, the team initially partnered with a Kenyan distributor of reputable menstrual cups that were manufactured in Canada. Buying the cups through a local, third-party entity enabled the activity to support a Kenyan woman-owned business and facilitate a nascent but growing market for menstrual cups. The activity also partnered with this business owner to provide product education to women employees at both partner companies at the start of the intervention. She offered tangible information using local slang and Swahili in a manner that was accessible, familiar, and understandable by women employees. Due to an unexpected defect with the menstrual cup, the activity entered a new working relationship with another menstrual cup provider who produced products in China but had a local Kenyan outfit. This company also offered product education and sensitization sessions, led by a Kenyan trainer with deep contextual understanding of the end users.

RECOMMENDATION

Design with the end in mind: plan for sustainability of MHH efforts from the start by engaging with local experts and stakeholders who are positioned to continue the work in the long run.

9.2 AREAS FOR FUTURE RESEARCH

The *MHM in the Workplace* action research surfaced important gaps in knowledge. Additional research in the following areas would make important contributions to the field of MHH in the workplace:

- What workplace features facilitate or hinder successful adoption of MHH practices? For example, do family-owned businesses, businesses owned by women, or businesses that require more detailed expertise/craftmanship by employees, result in stronger commitment to/investments in improved MHH conditions? Are businesses that have majority female employees, or majority women in management and supervision roles more likely to implement MHH improvements?
- What are best practices to improve MHH in different work sectors (e.g., agriculture, technology, manufacturing, informal sectors, etc.)?
- Are there specific internal operational policies (e.g., paid sick leave benefits; temporary change in work responsibilities during menstruation, etc.) that are most effective in institutionalizing positive MHH changes?
- How can supervision practices and workplace incentives support MHH in the workplace?
- What is the relative contribution of infrastructure upgrades and free/subsidized menstrual products to improved MHH in the workplace, compared to an MHH-friendly workplace culture and stigma reduction?
- Which variables most significantly contribute to better business outcomes (e.g., through fewer absences, reduced presenteeism, improved corporate reputation) when we improve MHH in workplaces? Which components are most responsible for the largest share of benefits?

9.3 COUNTRY-SPECIFIC LIMITATIONS

NEPAL

- 1) The COVID-19 situation in Nepal, and Kathmandu in particular, posed unique limitations to research activities. During the implementation period, Nepal introduced a series of strict lockdowns starting in March 2020, which delayed intervention program activities within the workplaces and continued to affect the action research through late 2021. The lockdowns and other COVID-19 restrictions meant ongoing changes to the original action research plan and timeline: the research team had to collect baseline survey data by zoom interview with staff members, rather than in person; research teams could not carry out sensitization sessions at both workplaces; the research team had to wear full personal protective equipment during BCC and education sessions and FGDs, with an unknown effect on their ability to communicate and connect with participants; and monthly in-person education touch points with employees and staff did not take place for three months, although the activity continued monthly distribution of menstrual products. The domino effect of delays meant that endline data collection was rescheduled too close to holidays and major production deadlines at the workplace. Women in one of the workplaces would commit to only twenty minutes for endline FGDs because they were anxious to return to their positions and keep working to meet their deadlines. This limited the amount of material that could be covered with employees and may have diluted the impact of the intervention.
- 2) Employees at both workplaces had very limited education and low literacy. Furthermore, many employees did not speak Nepali. The team had to adapt content and simplify language to accommodate low education levels and had to translate messages into Hindi, Bhojpuri, and Maithili to effectively communicate with employees. These efforts affected the efficiency of sensitization sessions and perhaps limited the amount of content that they covered.

KENYA

- 1) Company B experienced significant fluctuations in women staff over the duration of the intervention. At baseline, the company employed over 200 women employees; however, staff in the export processing zone turned over at higher rates than expected, signaling high attrition of women who participated in the intervention from the start. In order to ensure that a minimum of 50 women employees present at baseline were surveyed at endline, the team moved up endline data collection by three months. While the intervention continued to the full 9 months, the short research timeline (6 months) may have limited what the team was able to learn.
- 2) The men's endline questionnaire in Company A was based on random sampling rather than a cohort comparison to baseline. As such, the team compared two random samples for this participant group, rather than the same individuals over time. The potential limitation to this approach is minimal, as the intervention did not target specific employees in distinct ways in which a comparative cohort sample would be necessary. However, an incongruent sampling frame might slightly dilute findings from an already small sample size.
- 3) The unexpected menstrual cup malfunction and subsequent recall seemed to have a negative effect on some women's comfort experimenting with this menstrual product. At endline, quantitative findings showed that women who used the menstrual cup and had a negative first experience were less likely to use this product again. Similarly, women who had not used the

cup and were holding out reported that they were afraid to use it after hearing what happened to some (i.e., the menstrual cup malfunction that was found in one batch of purchased cups distributed at launch). Despite this limitation, the research team found that a number of employees did adopt the menstrual cup and chose to use it regularly.

9.4 GLOBAL LIMITATIONS

- 1) The *MHM in the Workplace* action research was planned to be implemented in four countries to allow for greater geographic and cultural diversity. However, due to challenges caused by the COVID-19 pandemic and the time frame under the WASHPaLS project, the team had to limit the intervention to a total of four workplaces in two country settings. Furthermore, the sample size of research participants at each workplace was limited. As such, the findings were less diverse and less generalizable. In addition, the interventions were limited to 9–12 months in duration, affecting dose exposure and curtailing the team’s ability to pre-test the CBA and WTP tools as well as further adapt quantitative data collection instruments. The compressed time period of the intervention also affected the development and pretesting of BCC materials and limited the social norms change that could occur or be documented in research (i.e., stigma reduction, behavior change and improved practices, overall workplace culture).
- 2) COVID-19 created an unprecedented backdrop for the MHM intervention, with a range of variables potentially affecting conditions in the workplace and in women’s lives. Such factors included competing demands on women’s time and resources; economic pressures around productivity; additional stressors affecting worker dynamics with supervisors and management; and fluctuations in the workforce due to unstable supply and demand variables. It was difficult to attribute changes in business outcomes and women’s wellbeing outcomes to MHM conditions when the broader environment was so immensely affected by the pandemic.

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APPENDIX A: PROCESS MONITORING DATA

This appendix includes process monitoring data from the MHM in the Workplace interventions in Nepal and Kenya. Table 39 and Table 40 categorize process monitoring data by intervention elements and the three main components: products and infrastructure, workplace policies and guidance, and education and behavior change communication/ workplace culture.

Table 39. Process monitoring data from Nepal

Intervention Element	Activities Achieved by WASHPaLS
Provide menstrual products (<i>Maryadit Karyasthal</i> at launch plus routine distribution for those who joined the workplaces afterwards)	<p style="text-align: center;">Products and infrastructure</p> <p>Company A</p> <ul style="list-style-type: none"> • 58 <i>Maryadit Karyasthal</i> menstrual wellness bags distributed at the factory • 2 products education sessions were facilitated for all women employees • 58 packages of 9 reusable sanitary pads—daytime and nighttime use—and 3 panties were provided to women employees at launch <p>Company B</p> <ul style="list-style-type: none"> • 69 <i>Maryadit Karyasthal</i> menstrual wellness bags distributed at the factory • 2 products education sessions were facilitated for all women employees
Provided disposable sanitary pads at launch and throughout the intervention	<p>Company A</p> <ul style="list-style-type: none"> • 116 packs of daytime-use pads and 58 packs of nighttime-use pads were distributed to the women employees • 116 packs of daytime-use disposable sanitary pads and 58 packs of nighttime-use disposable sanitary pads were distributed each month as part of the monthly product allocation • 2 products education sessions were facilitated for all women employees <p>Company B</p> <ul style="list-style-type: none"> • 138 packs of daytime use disposable sanitary pads and 68 packs of nighttime-use disposable sanitary pads were distributed each month as part of the monthly product allocation • 2 products education sessions were facilitated for all women employees • 68 packages of 9 reusable sanitary pads—daytime and nighttime use—and 3 panties were provided to the women at launch
Installed disposal bins and menstrual waste disposal system	<p>Company A</p> <ul style="list-style-type: none"> • Contracted with Mitra Samaj who provided 4 sanitary napkin disposal bins that were installed in the women’s toilets and waste pick-up was conducted twice a week. Please note that the pick-up was not possible for 2 months during the Government of Nepal imposed COVID-19 lockdown, and as such, the disposal service will continue till December 31, 2021 <p>Company B</p> <ul style="list-style-type: none"> • Mitra Samaj was not contracted to provide services at Company B as the company had already installed their own bins near the women’s restrooms after initial conversations with WASHPaLS staff during the scoping discussions

Intervention Element	Activities Achieved by WASHPaLS
<p>Conduct infrastructure assessment and advise on infrastructure changes that support female-friendly toilets¹¹</p>	<p>Company A</p> <ul style="list-style-type: none"> ● One infrastructure assessment conducted during scoping visit in November 2019 and discussion were carried out with company leadership and management. From these conversations, the company leadership and management invested in new toilets for women and men at the workplace which were operational by February 2020 when the team carried out the formative assessment. Changes to the toilet infrastructure included new Indian style commodes, tiling, lighting in each toilet, running water, lockable doors, a bucket in each restroom and privacy wall between the men’s and women’s toilets ● A formal infrastructure assessment was carried out at baseline, and recommendations made for small-scale infrastructure upgrades, including attaching a hook behind each door ● 5 women’s toilet stalls outfitted with new Indian style commodes ● 5 women’s toilet stalls outfitted with hooks behind doors ● 4 soap dispensers installed in women’s toilet facilities ● 1 long table was included at the handwashing station <p>Company B</p> <ul style="list-style-type: none"> ● One infrastructure assessment was conducted at baseline, and recommendations made for company investment in large-scale infrastructure upgrades ● By November 2021, the company had made infrastructure improvements which included 3 separate women’s only toilets with lockable doors and running water ● 3 women’s toilet stalls outfitted with hooks behind doors ● 10 soap dispensers installed in women’s toilet facilities and in the factory premises ● All women’s toilet facilities provided with a non-menstrual waste bin
<p>Encourage system-level enhancements to support female-friendly toilets, including education for facility cleaners to improve service delivery</p>	<p>Company A</p> <ul style="list-style-type: none"> ● 2 BCC poster designs were developed, printed, and posted in workplace toilet facilities, covering the topics: 1) How to use toilets and menstrual hygiene materials; 2) Disposal, and; 3) Proper handwashing and hygiene ● Education playing cards depicted proper use and disposal of menstrual materials ● The edutainment video included education on proper use and disposal of menstrual materials <p>Company B</p> <ul style="list-style-type: none"> ● 2 BCC poster designs were developed, printed, and posted in workplace toilet facilities, covering these topics: 1) How to use toilets and menstrual hygiene materials; 2) Disposal, and; 3) Proper handwashing and hygiene

¹¹ Direct infrastructure improvements are outside the scope of any WASHPaLS activity. Selection criteria for participating workplaces in this study included existing WASH infrastructure (e.g., separate male/female toilets), and a willingness on behalf of the partner company to improve facilities, pending recommendations.

Intervention Element	Activities Achieved by WASHPaLS
	<ul style="list-style-type: none"> • Education playing cards depicted proper use and disposal of menstrual materials • The edutainment video included education on proper use and disposal of menstrual materials
Workplace policies and guidance	
<p>Conducted company and national level policy analysis discussions and made recommendations for MHM-sensitive and supportive policies, and offered technical assistance</p>	<p>Company A & Company B</p> <ul style="list-style-type: none"> • As neither of the workplaces have formal HR policy manuals, the team utilized appreciative inquiry, a strengths-based approach to operational design, to facilitate discussions with leadership and management at the two workplaces toward creating a HR policy document that would incorporate MHH/MHM language • Company B leadership has agreed to create an HR manual which will incorporate MHH/MHM recommendations and language • At the recommendation of the Joint Secretary of the Ministry of Water Supply, in collaboration with the Federation of Women Entrepreneurs Association of Nepal, WASHPaLS approached the International Labor Organization’s Kathmandu office to include MHM in Workplace Operational Safety and Health Guidelines
<p>Facilitate the creation of a Workplace MHM Advisory Committee (external to the partner companies) to support the intervention and companies’ key personnel</p>	<ul style="list-style-type: none"> • A Workplace MHM Advisory Board was developed in June 2020. The research team invited the following people to participate: <ul style="list-style-type: none"> – Mr. Guna Raj Shrestha: MHM Partners Alliance of Nepal – Dr. Roshan Raj Shrestha: Bill and Melinda Gates Foundation – Dr. Anjana Dangol: Kathmandu University School of Medical Sciences – Ms. Biju Dangol: OXFAM, Nepal – Ms. Neeru Rayamajhi Katri: Federation of Women Entrepreneurs Association of Nepal (FWEAN) – Mr. Jiblal Pokharel: Nepal CRS Company – Dr. Marni Sommer: Columbia University – Mr. Jeffrey Barnes: Palladium Group • The Workplace MHM Advisory Board met on 2 occasions (to-date as a full group) • Each of the individual advisory board members have engaged the WASHPaLS team throughout the operations research. These individuals provided guidance, programmatic input, advice on liaising with the MHM community in Nepal, recommendations regarding products and supplies, and facilitated discussions between relevant ministries within the Government of Nepal • Mr. Jiblal Pokharel offered to host the Sustainability Partner Engagement at Nepal CRS Company.
Education and behavior change	
<p>Developed behavior change communication (BCC) materials to facilitate dialogue and facilitate dialogue with</p>	<p>Company A & Company B</p> <ul style="list-style-type: none"> • Developed a set of BCC materials, including posters and playing cards, designed uniquely for the Nepali workplace context and for low literacy populations

Intervention Element	Activities Achieved by WASHPaLS
women employees, men and management.	<ul style="list-style-type: none"> Utilized these tools to engage women, men, and management at the workplaces in dialogue regarding MHM in the workplace. Large cutouts of the posters were pasted on the walls at both workplaces Playing cards will be distributed to the women and men at the workplaces Created a 3-part edutainment video that discussed MHM-related issues including the physiology of menstruation, proper use and disposal of menstrual hygiene materials, workplace culture, supportive work environment and taboos among others
Facilitate MHM sensitization sessions and discussions with women employees	<p>Company A & Company B</p> <ul style="list-style-type: none"> The research team facilitated in-person sensitization sessions with women at both workplaces Each engagement was limited to one 30-minute session once a month MHM-related issues including the physiology of menstruation, proper use and disposal of menstrual hygiene materials, workplace culture, supportive work environment and taboos among others were covered during these sessions
Male engagement	<p>Company A & Company B</p> <ul style="list-style-type: none"> The research team facilitated in-person sensitization sessions with male groups at both workplaces Each engagement was limited to one 30-minute session once a month MHM-related issues including the physiology of menstruation, proper use and disposal of menstrual hygiene materials, workplace culture, supportive work environment and taboos among others were covered during these sessions Special attention was paid to how men can engage in creating a supportive work environment for female co-workers
Facilitated male engagement sessions with management/supervisors	<p>Company A & Company B</p> <ul style="list-style-type: none"> Appreciative inquiry was utilized to engage male supervisors and managers at both workplaces Special attention was paid to how supervisors and management can engage in creating a supportive work environment for female co-workers MHM-related issues including the physiology of menstruation, proper use and disposal of menstrual hygiene materials, workplace culture, supportive work environment and taboos among others were covered during these sessions

Table 40. Process monitoring data from Kenya

Intervention Element	Activities Achieved by WASHPaLS
	Products and infrastructure
Provide menstrual products (menstrual wellness bags at launch plus routine distribution) and facilitate products education	<p>Company A</p> <ul style="list-style-type: none"> 69 menstrual wellness bags distributed at launch (and in month 2 for new hires), each including 1 pack (8 pieces) of disposable pads, 1 pack (10 pieces) of reusable pads, and 1 menstrual cup 678 disposable pad packs (8 pieces/pack) distributed to women employees, as part of monthly product allocation 2,070 emergency disposable pads distributed to women employees at work

Intervention Element	Activities Achieved by WASHPaLS
	<ul style="list-style-type: none"> ● 2 products education sessions were facilitated for all women employees <p>Company B</p> <ul style="list-style-type: none"> ● 281 menstrual wellness bags distributed at launch (and in month 2 for new hires), each including 1 pack (8 pieces) of disposable pads, 1 pack (10 pieces) of reusable pads, 1 menstrual cup, and 3 pieces of underwear ● 1,970 disposable pad packs (8 pieces/pack) distributed to women employees, as part of monthly product allocation ● 6,345 emergency disposable pads distributed to women employees at work ● 2 products education sessions were facilitated for all women employees
<p>Conduct infrastructure assessment and advise on infrastructure changes that support female-friendly toilets¹²</p>	<p>Company A</p> <ul style="list-style-type: none"> ● 1 infrastructure assessment conducted at baseline, and recommendations made for company investment in large-scale infrastructure upgrades ● 8 women’s toilet stalls outfitted with shelves ● 9 women’s toilet stalls outfitted with hooks behind doors ● 4 automatic hand dryers installed in women’s toilet facilities ● 4 soap dispensers installed in women’s toilet facilities ● 1 women’s toilet facilities provided with a non-menstrual waste bin ● 4 toilet facilities provided with a small table by the handwashing station <p>Company B</p> <ul style="list-style-type: none"> ● 1 infrastructure assessment conducted at baseline, and recommendations made for company investment in large-scale infrastructure upgrades ● 3 women’s toilet stalls outfitted with shelves ● 4 women’s toilet stalls outfitted with hooks behind doors ● 1 automatic hand dryers installed in women’s toilet facilities ● 2 soap dispensers installed in women’s toilet facilities ● 2 women’s toilet facilities provided with a non-menstrual waste bin ● 1 toilet facilities provided with a small table by the handwashing station
<p>Encourage system-level enhancements to support female-friendly toilets, including education for facility cleaners to improve service delivery</p>	<p>Company A & Company B</p> <ul style="list-style-type: none"> ● 2 BCC poster designs were developed, printed, and posted in workplace toilet facilities, covering these topics: 1) Cleaners’ Checklist, and 2) Disposal <p>Company A</p> <ul style="list-style-type: none"> ● 2 cleaners (1 woman, 1 man) sensitized in female-friendly toilets and MHM <p>Company B</p> <ul style="list-style-type: none"> ● 4 cleaners (2 women, 2 men) sensitized in female-friendly toilets and MHM
Workplace policies and guidance	
<p>Conduct policy analysis and make recommendations for MHM-sensitive and supportive policies, and offer technical assistance</p>	<p>Company A & Company B</p> <ul style="list-style-type: none"> ● 2 policy analyses conducted (1 per workplace), with 37 total policies reviewed; recommendations were generated based on analysis findings ● 2 leadership consultation sessions (1 per workplace) facilitated to present policy analyses’ findings and recommendations generated from the analysis

¹² Direct infrastructure improvements are outside the scope of any WASHPaLS activity. Selection criteria for participating workplaces in this study included existing WASH infrastructure (e.g., separate male/female toilets), and a willingness on behalf of the partner company to improve facilities, pending recommendations.

Intervention Element	Activities Achieved by WASHPaLS
	<ul style="list-style-type: none"> • Technical assistance provided to Company A, at partner company's request; developed employee handbook for the company's customization and development of implementation strategies (including reporting mechanisms) referenced in the handbook
Facilitate the creation of a Workplace MHM Advisory Committee (external to the partner companies) to support the intervention and companies' key personnel	<p>Company A & Company B</p> <ul style="list-style-type: none"> • 12 Kenyan professionals comprised the Workplace MHM Advisory Committee • 10 Advisory Committee meetings facilitated, covering the following topics of discussion: intro to workplace MHM, linkages between SRH and MHM, workplace MHM and the Kenya landscape, male engagement, and workplace MHM, WASHPaLS baseline findings, workplace MHM sustainability, cost-benefit analysis, findings dissemination to the private sector, and final appreciation
Workplace culture	
Facilitate digital dialogue and BCC materials sharing through WhatsApp to women employees	<p>Company A & Company B</p> <ul style="list-style-type: none"> • 2 WhatsApp groups created (1 per workplace) for women employees • 17 digital BCC posters designed and disseminated to each WhatsApp group
Design and distribute hard-copy BCC materials to select employee groups in the partner company	<p>Company A & Company B</p> <ul style="list-style-type: none"> • 5 BCC posters designed, printed, and posted or used in sensitization sessions, covering the following topics: SMS reminders for survey, understanding my body, and understanding my cycle • 13 population-specific BCC products (brochures, pamphlets, and booklets; in both Swahili and English) designed, printed, and disseminated to guards, first aid provider, nurse, worker relations/union representatives, senior management and leadership, and MHM Champions
Facilitate MHM sensitization sessions with select employee groups in the partner company	<p>Company A</p> <ul style="list-style-type: none"> • 1 sensitization session facilitated with the nurse (by medical advisor), 1 woman • 1 sensitization session facilitated with the MHM champion, 1 woman • 1 sensitization session facilitated with union representatives, 7 men • 2 sensitization sessions facilitated with the menstrual health committee at Company A, 10 women and 19 men (including 10 men supervisors) <p>Company B</p> <ul style="list-style-type: none"> • 2 sensitization sessions facilitated with first aid providers at Company B (by menstrual health advisor), 5 women and 1 man (primary first aid provider is a woman) • 2 sensitization sessions facilitated with MHM champions, 5 women • 2 sensitization sessions facilitated with supervisors, 10 men and 7 women • 1 sensitization session facilitated with guards, 1 man and 1 woman • 1 sensitization session facilitated with worker relations representatives, 2 women and 1 man
Facilitate immersive appreciative inquiry	<p>Company A</p>

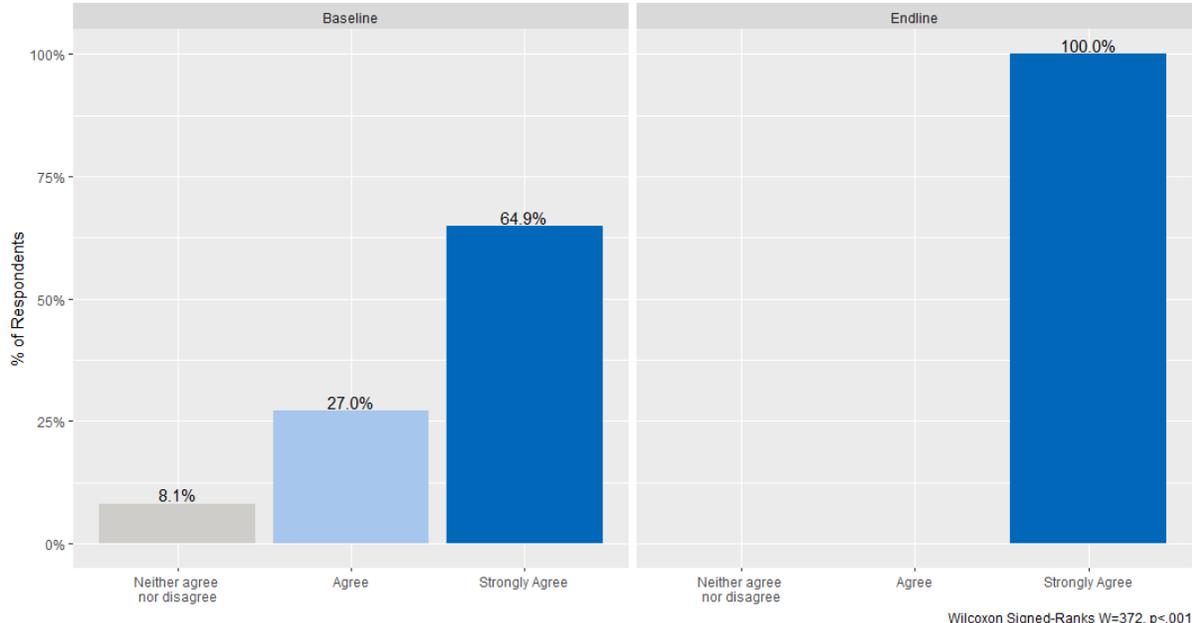
Intervention Element	Activities Achieved by WASHPaLS
sessions with selected groups at each partner company.	<ul style="list-style-type: none"> • 1 appreciative inquiry session facilitated with 66 women employees (including the managing director) • 1 appreciative inquiry session facilitated with 10 women employees to co-design the male-engagement component of the workplace MHM intervention and sustainability efforts at the workplace • 1 appreciative inquiry session facilitated with senior management and leadership <p>Company B</p> <ul style="list-style-type: none"> • 1 appreciative inquiry session facilitated with senior management and leadership

APPENDIX B: QUANTITATIVE DATA SUMMARIES

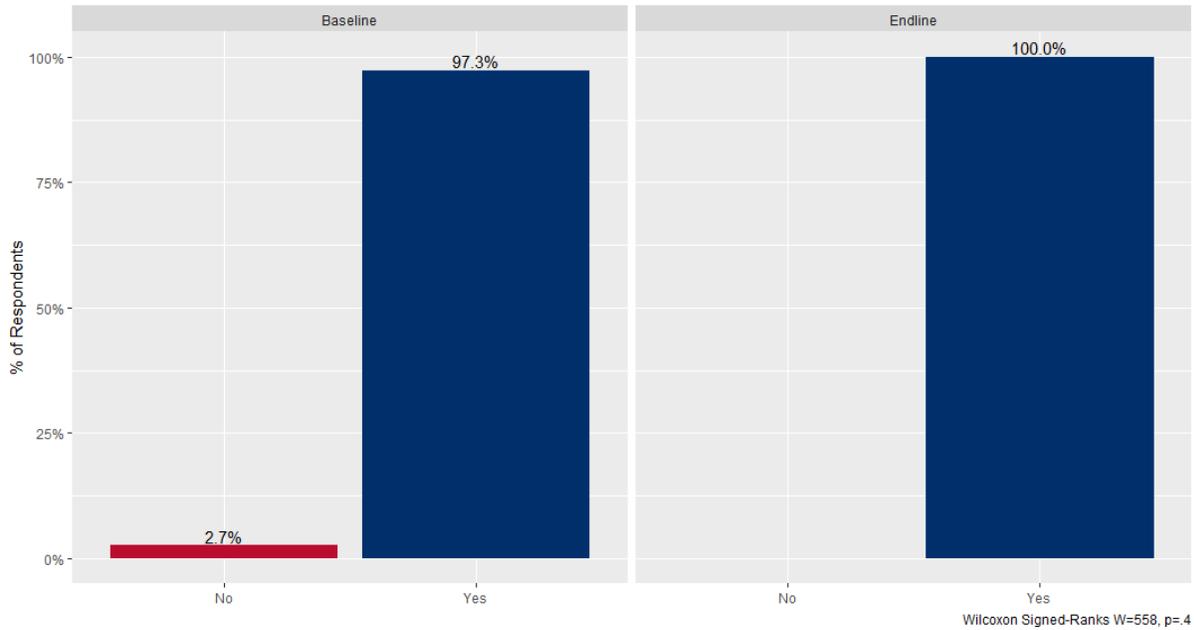
For all workplaces in Nepal and Kenya, we analyzed data collected using women’s questionnaires at baseline and endline. This appendix includes graphs that compare women’s responses to certain questions at baseline and endline to illustrate changes in outcomes before and after the intervention.

NEPAL COMPANY A

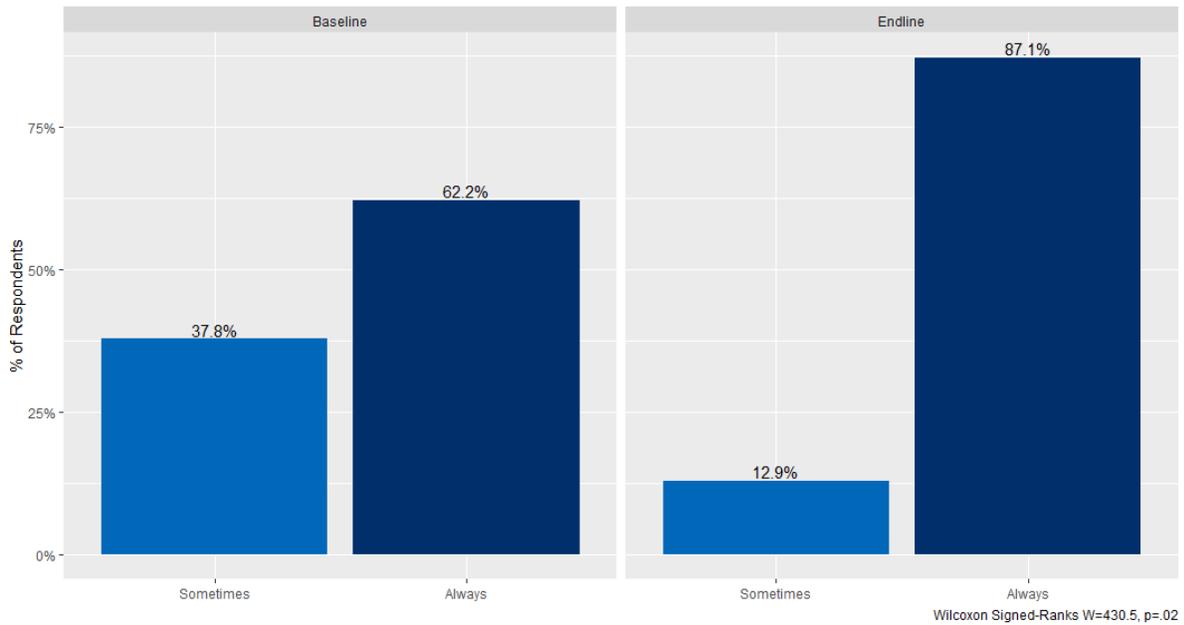
Confidence managing menstruation: We measured confidence managing menstruation with a 5-point Likert Scale question. Women were asked whether they agreed with the following statement: “I feel confident to manage my menstrual period at work, including changing, disposing, or washing material.” Scores ranged from 1 (Strongly disagree) to 5 (Strongly agree).



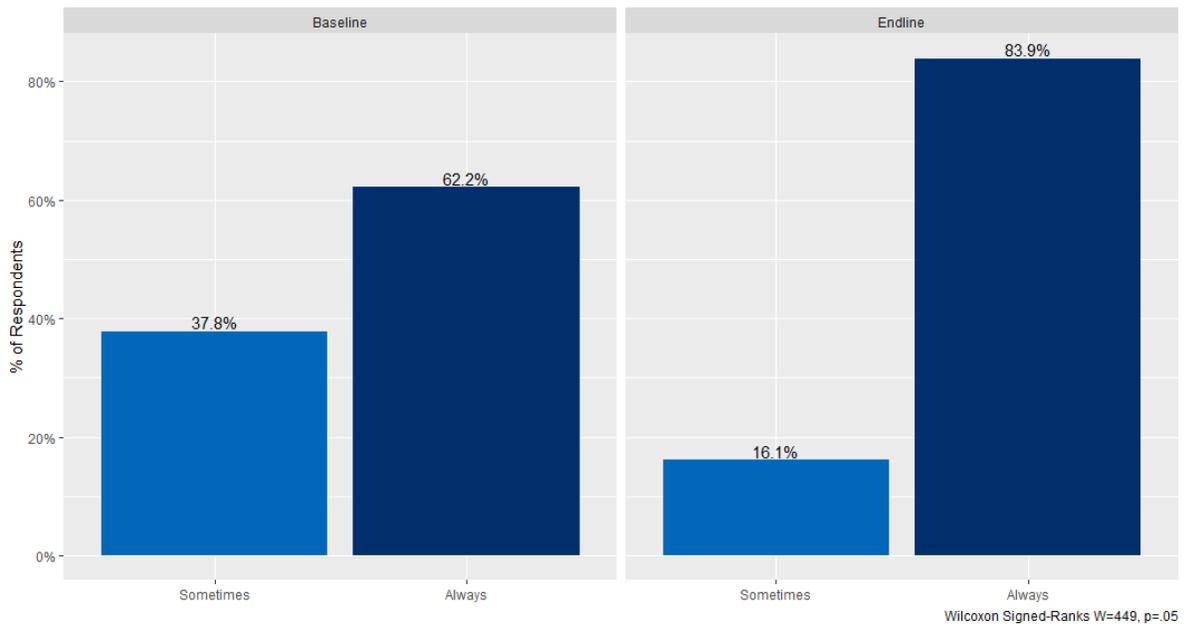
Adequate MHM: We measured access to materials with a dichotomous question. Women were asked “Did you have access to the materials you needed for managing your last menstrual period?” (Yes/No)



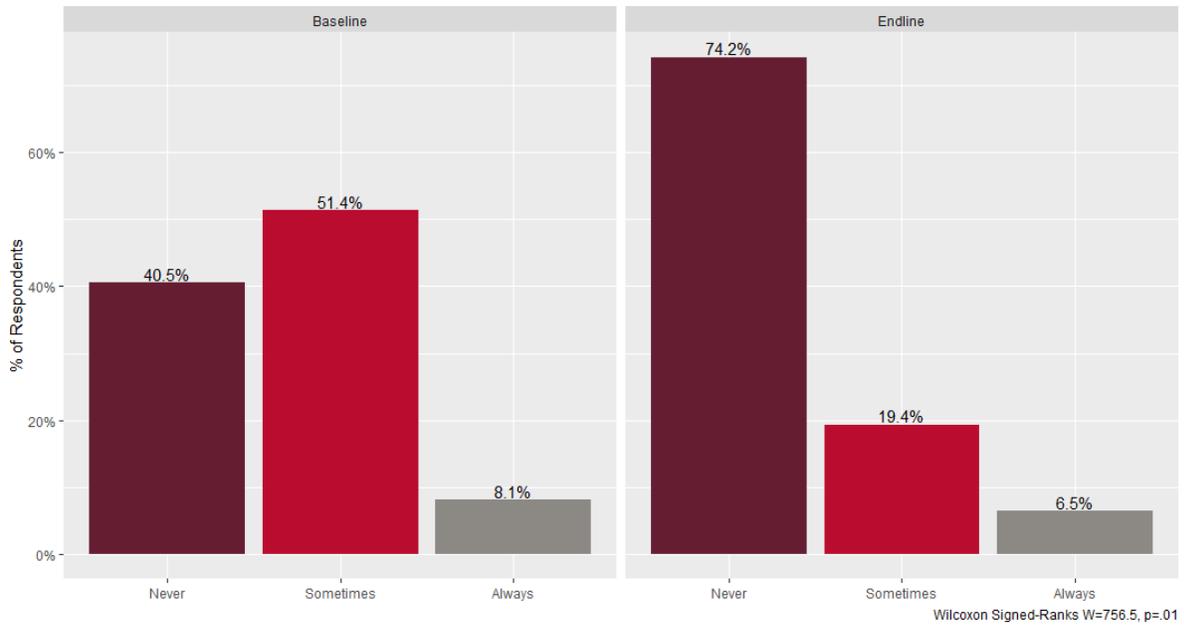
Materials: We measured satisfaction with quality and supply of menstrual materials using seven 3-point Likert Scale questions. Scores for each question ranged from 2 (Always) to 0 (Never), with a total score range of 0-14. Women were asked “How often did you have enough of your menstrual materials to change them when you wanted to?”



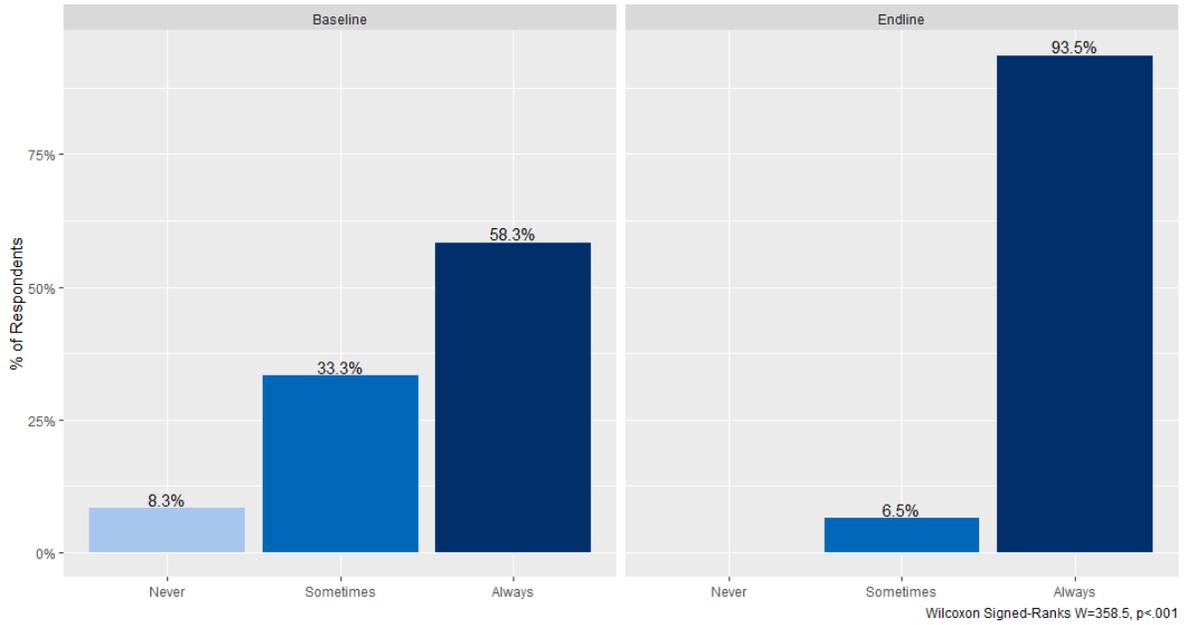
Women were asked “How often did you get more menstrual materials when you needed to?”



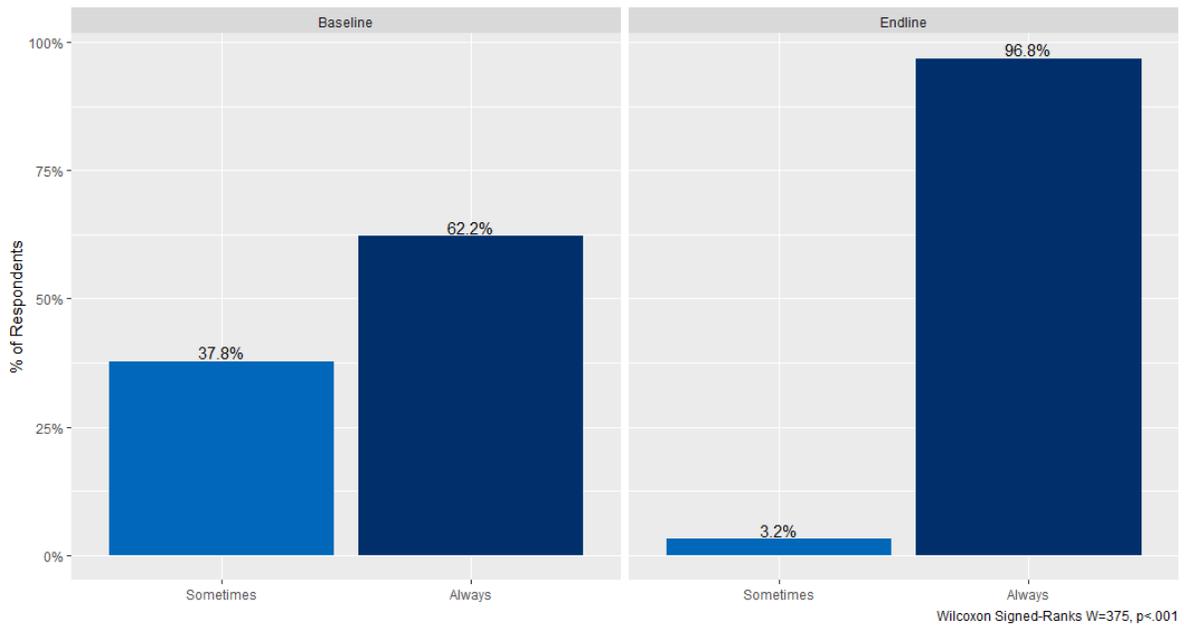
Women were asked “How often did you worry about how you would get more menstrual materials at work if you ran out?”



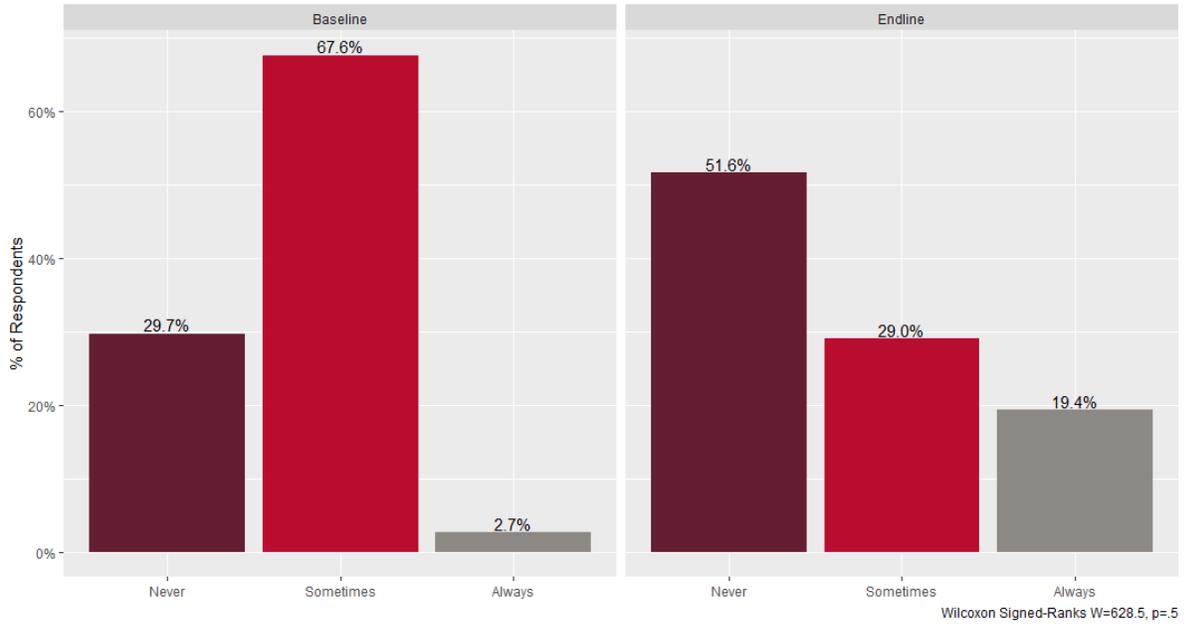
Women were asked “How often did you feel that your menstrual materials were comfortable?”



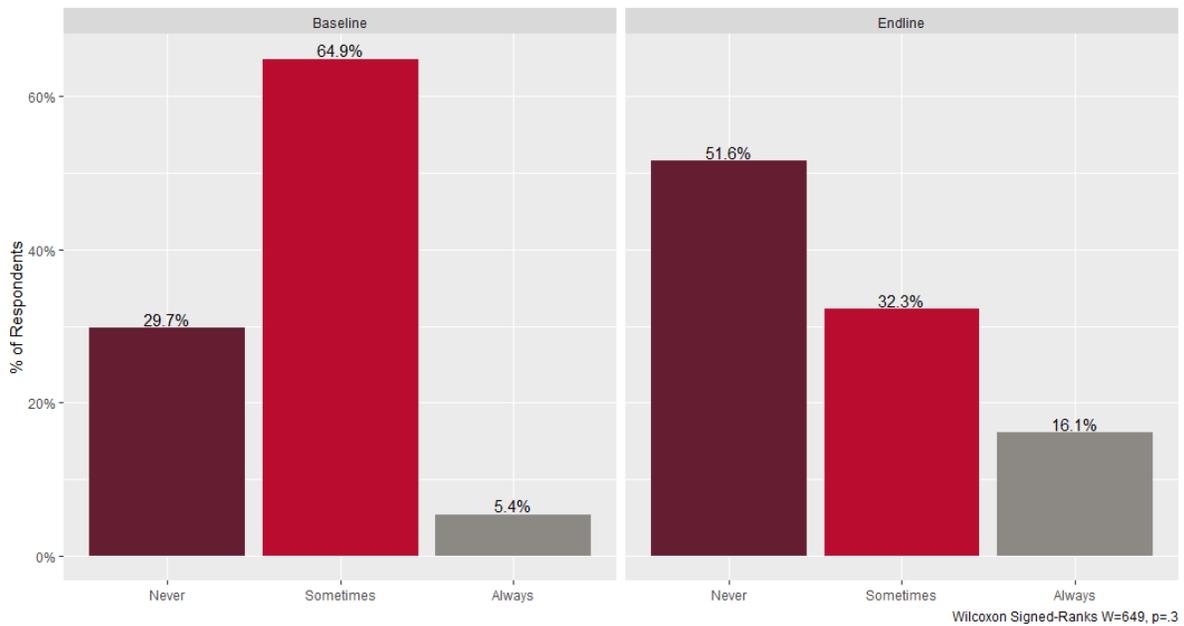
Women were asked “How often were you satisfied with the cleanliness of your menstrual materials?”



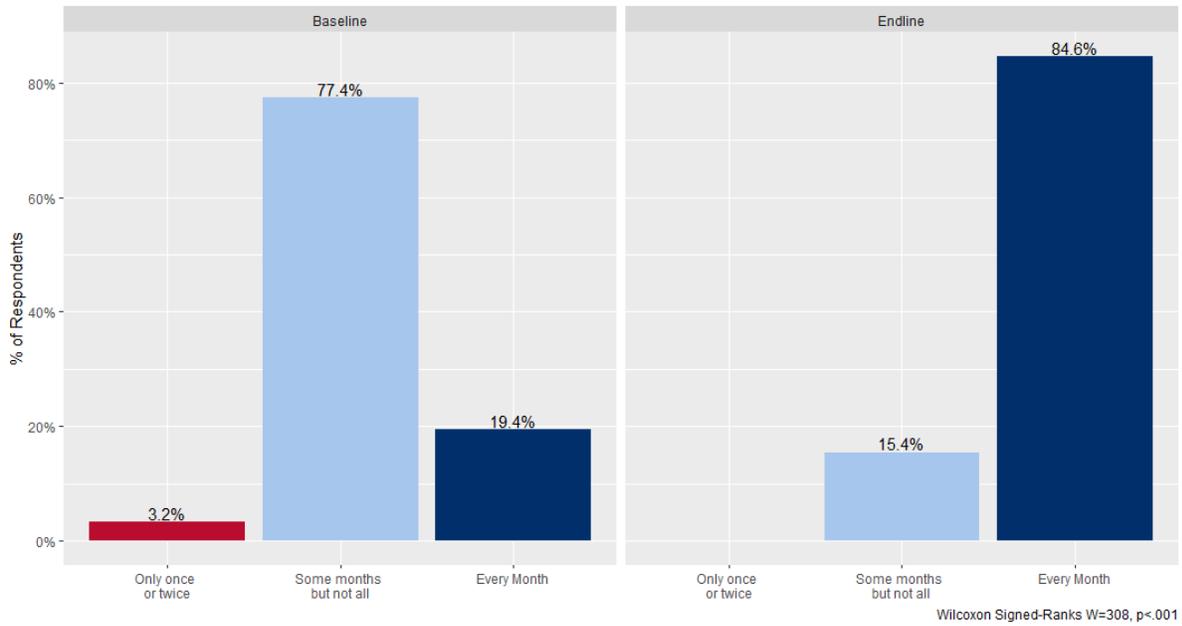
Women were asked “How often did you worry that your menstrual materials would allow blood to pass through to your garments?”



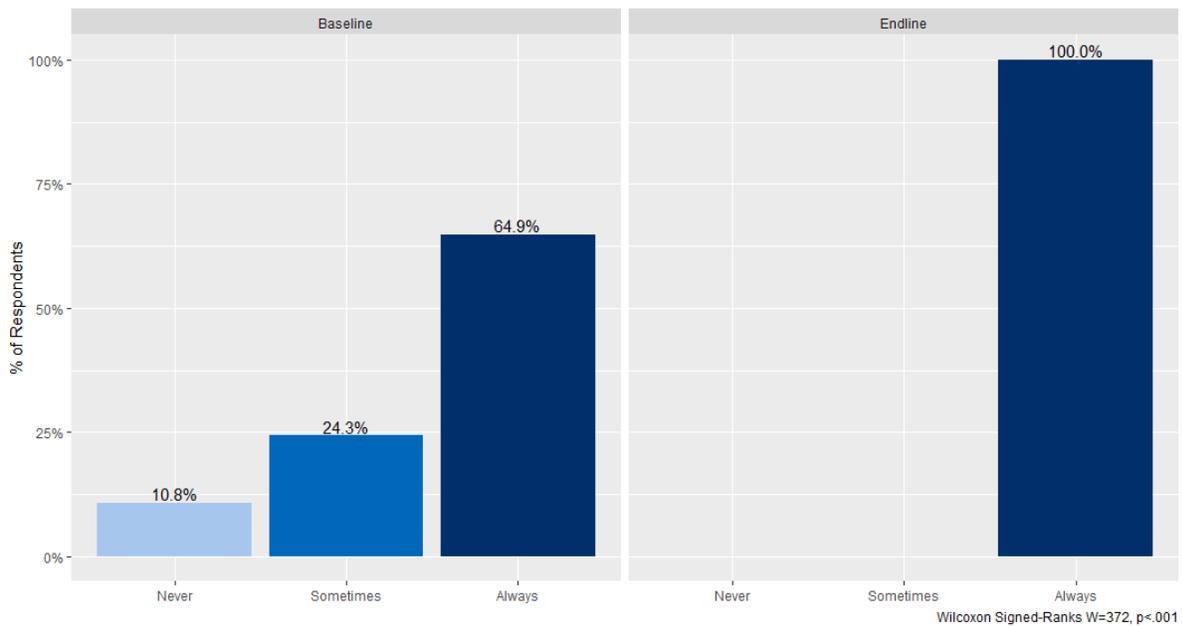
Women were asked “How often did you worry that your menstrual materials would move from place while you were wearing them?”



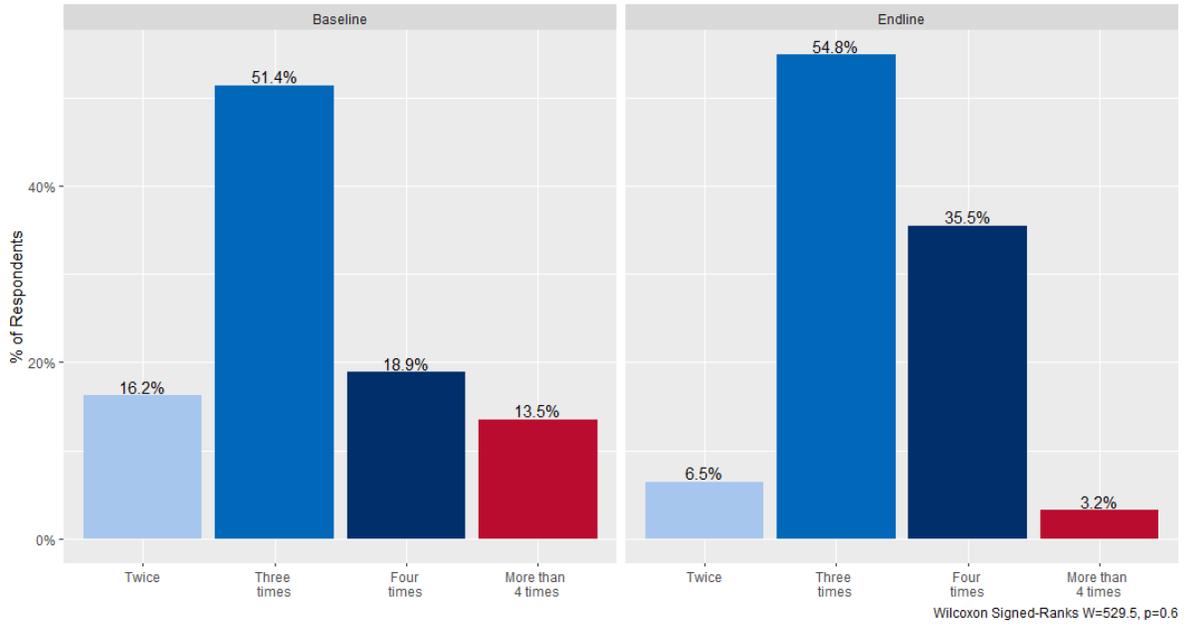
Affordability of menstrual materials: We measured affordability of menstrual materials with a 4-point Likert Scale question. Women were asked “During the last 11 months, how often did you have money to purchase menstrual materials?” Scores ranged from 3 (Every month) to 0 (Never).



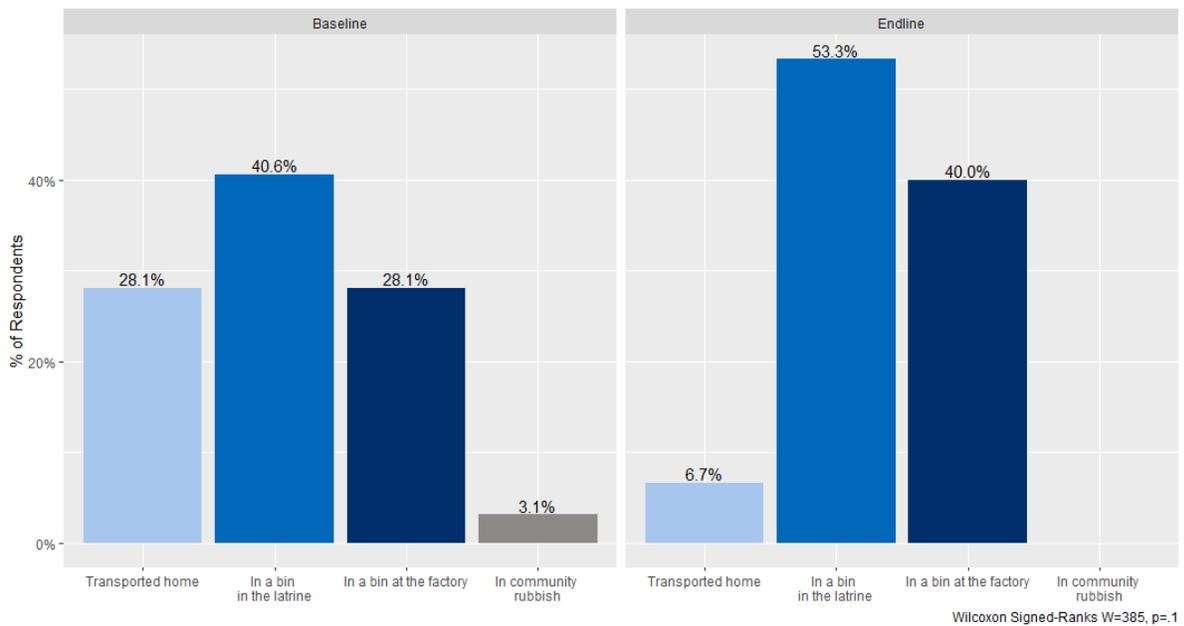
Changing menstrual materials: We measured possibility to change menstrual materials with a 3-point Likert Scale question. Women were asked “How often were you able to change your menstrual materials when you wanted to?” Scores ranged from 2 (Always) to 0 (Never).



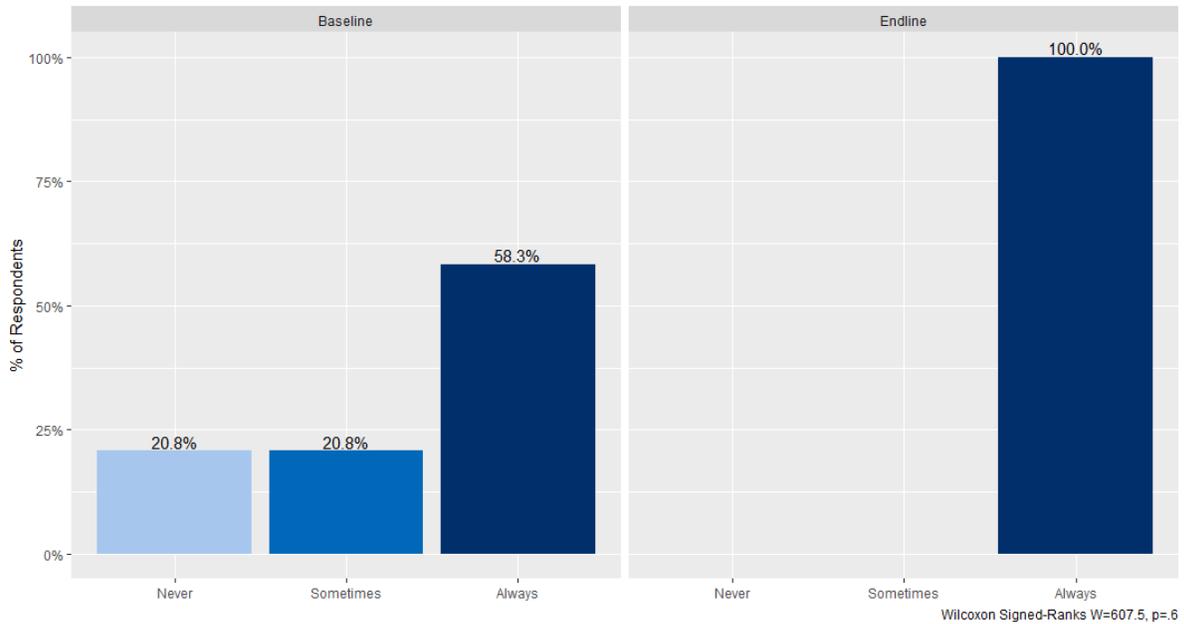
Women were asked “How many times did you change your menstrual products on the heaviest day of your period?”



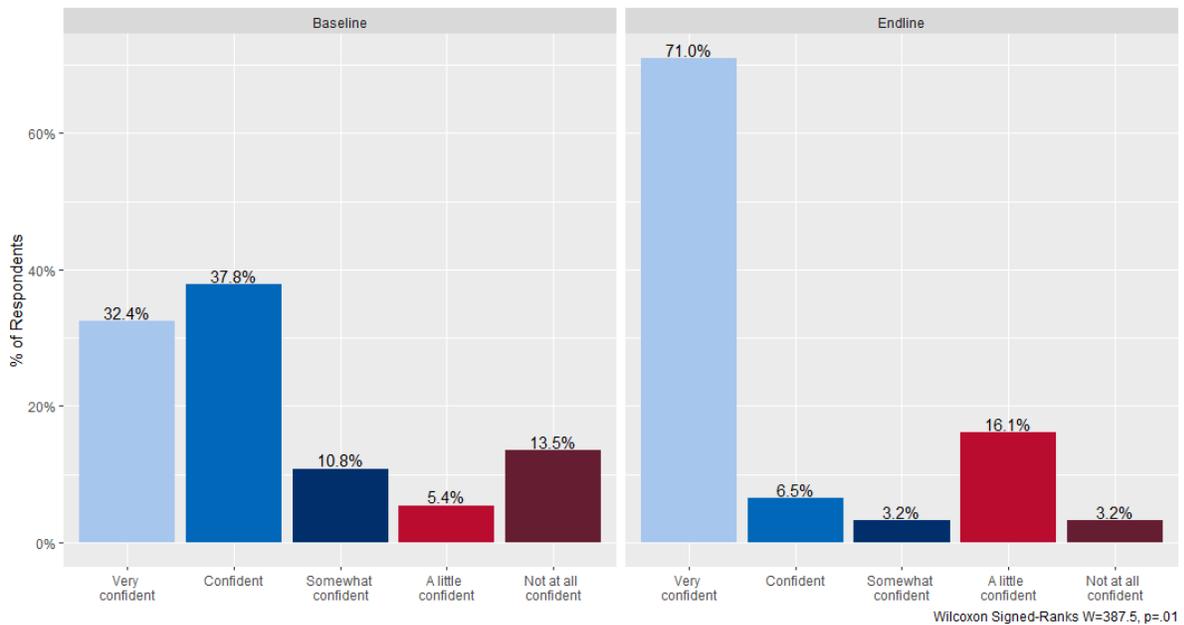
Disposal of used menstrual products: Women were asked “Where did you most often dispose of your used menstrual materials? In the latrine or toilet; In a bin in the latrine; In a bin at the factory, but outside of the latrine or toilet; In community rubbish (not at the factory); In a bush, waterway or buried; Burned; Transported used materials home to dispose of or reuse”



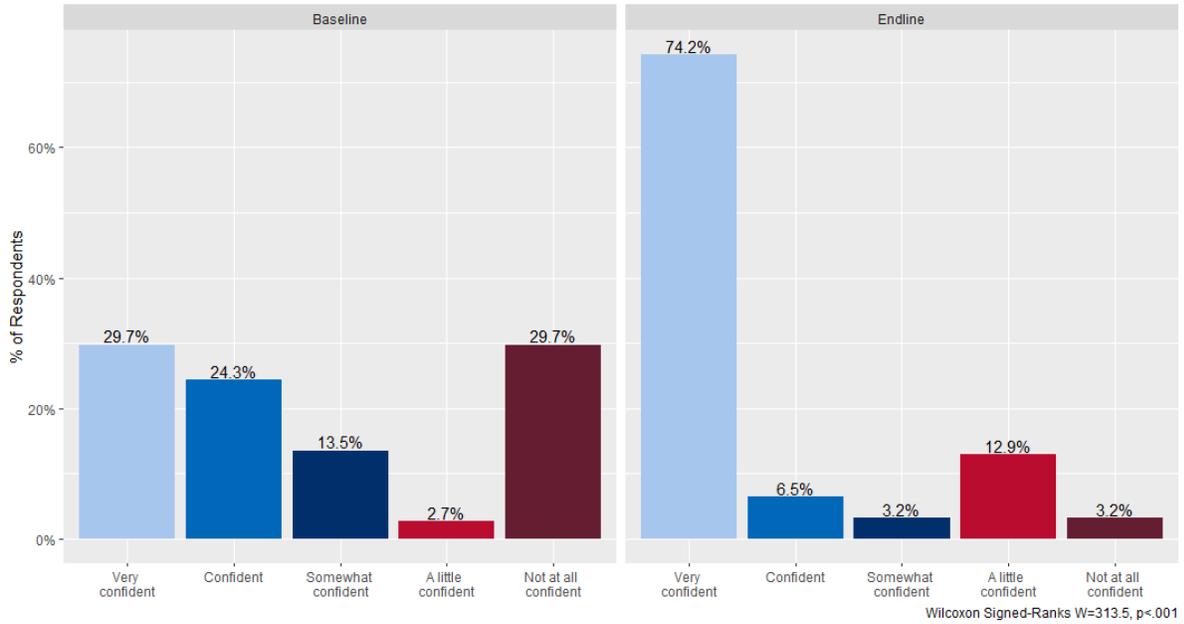
Storage of menstrual products at work: We measured storage through a 3-point Likert Scale questions. Women were asked “Did you feel comfortable carrying spare menstrual products with you to work?” Scores ranged from 2 (Always) to 0 (Never), with a total score range of 0-2.



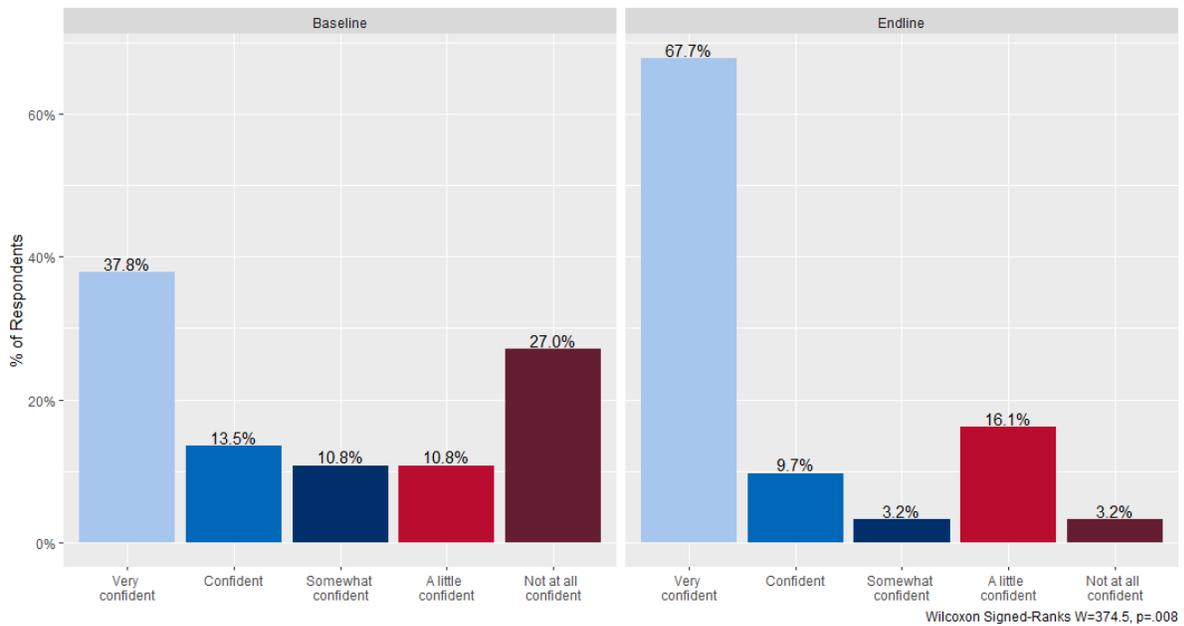
Support with managing menstruation at work: We measured support at work with four 5-point Likert Scale questions and one 3-point Likert Scale questions. Scores ranged from 1 (Not at all confident) to 5 (Very confident) for the first four questions, and from 0 (Not at all) to 2 (To a large extent) for the last question, with a total score range of 4-22. Women were asked “If you need advice about how to manage your period, how confident do you feel asking a colleague or another staff member?”



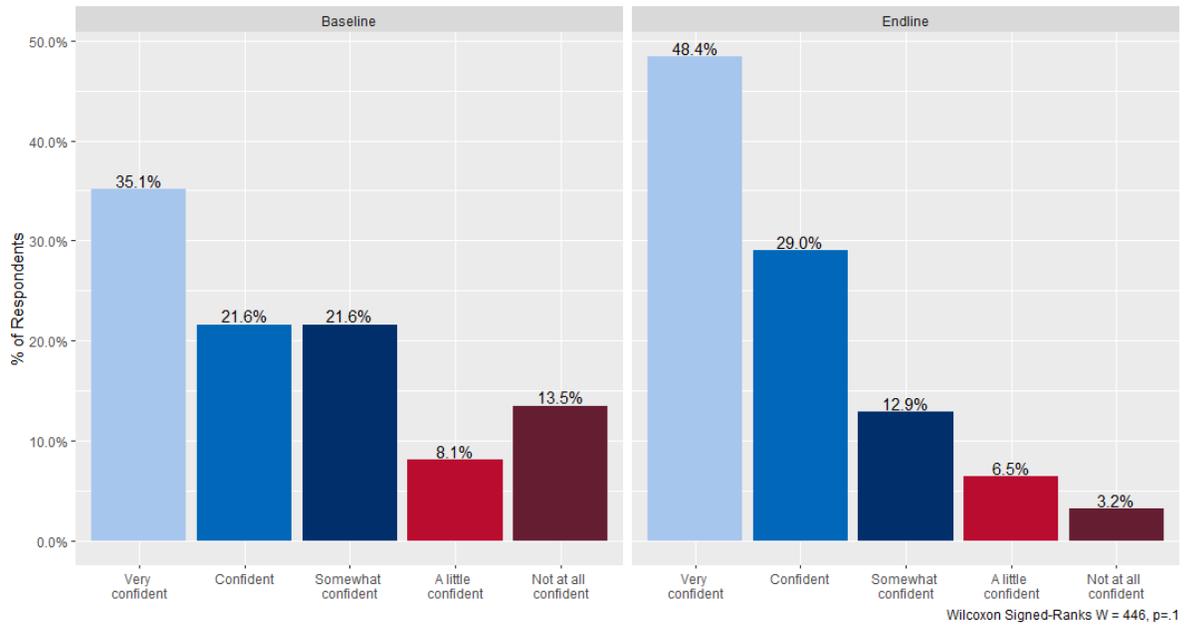
Women were asked “How confident do you feel asking a colleague or another staff member for menstrual materials if you need some (e.g., sanitary pad)?”



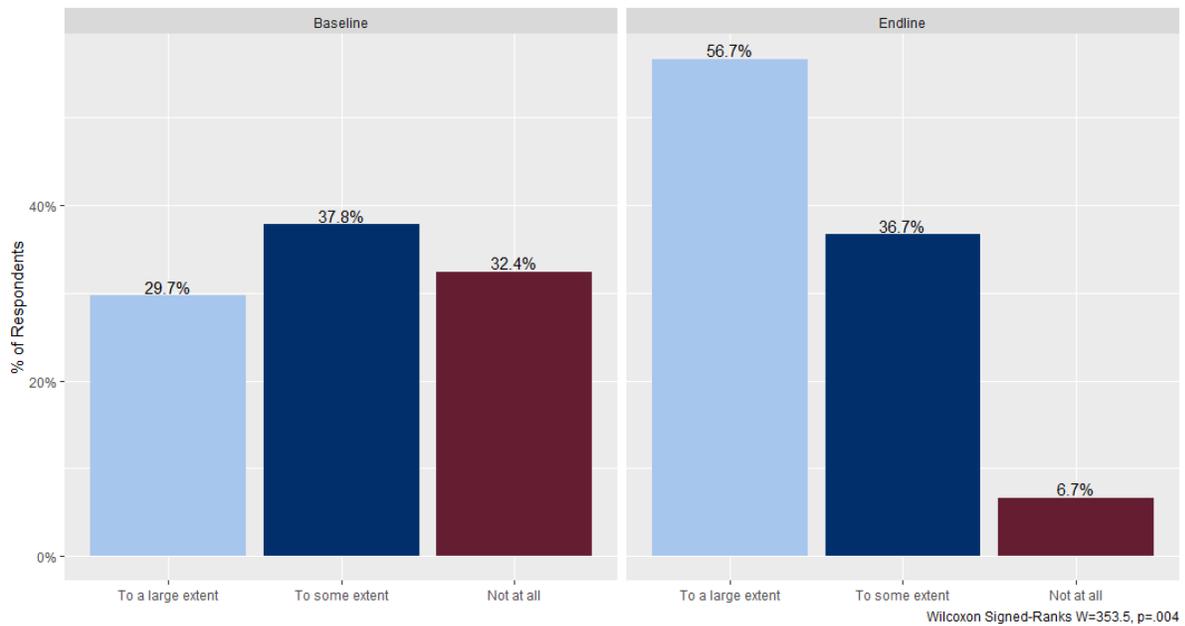
Women were asked “How confident do you feel asking a colleague or another staff member for pain management products or resources?”



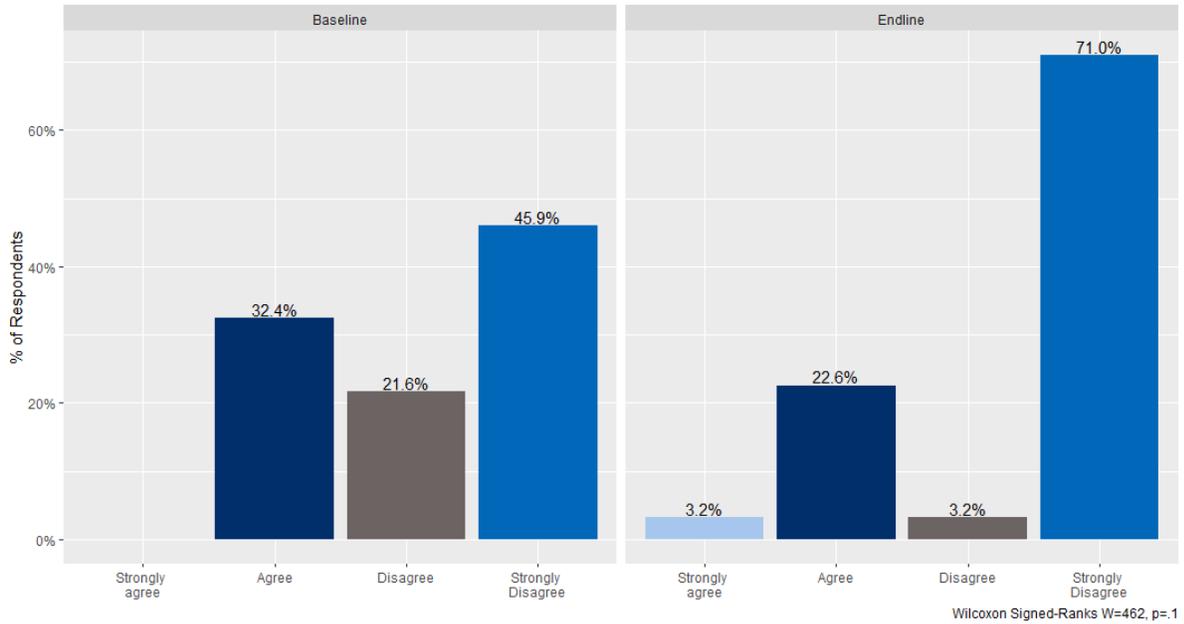
Women were asked “How confident do you feel reporting someone who bullied/teased/harassed you about menstruation to a supervisor or manager?”



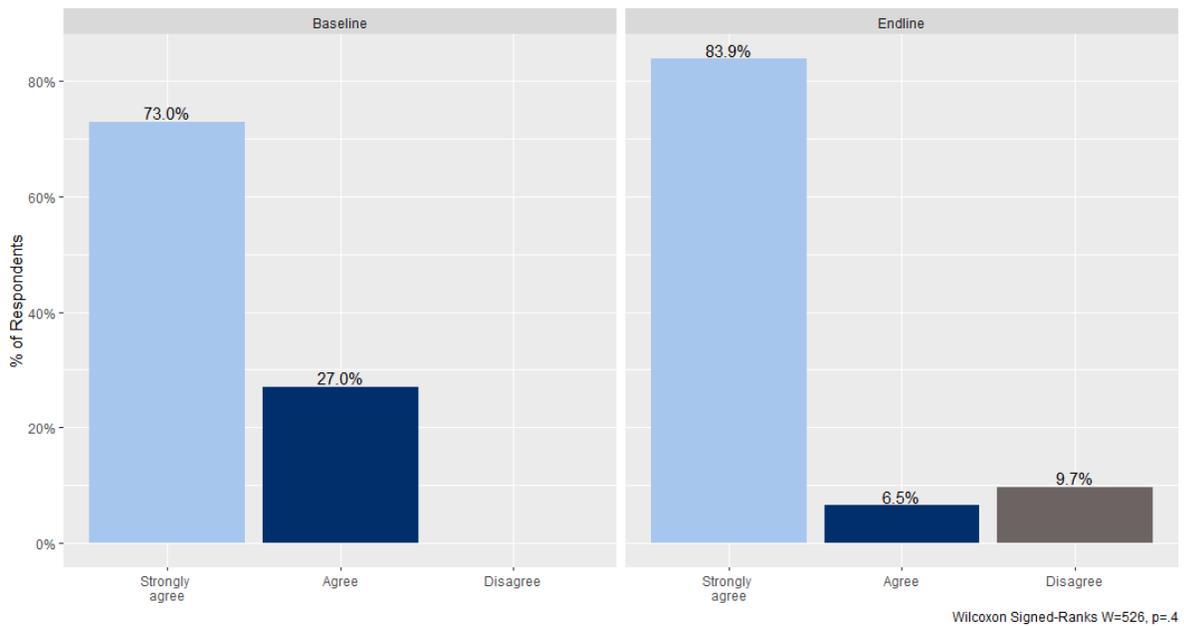
Women were asked “Do you feel comfortable telling your supervisors that you need to leave work for menstruation-related reasons?”



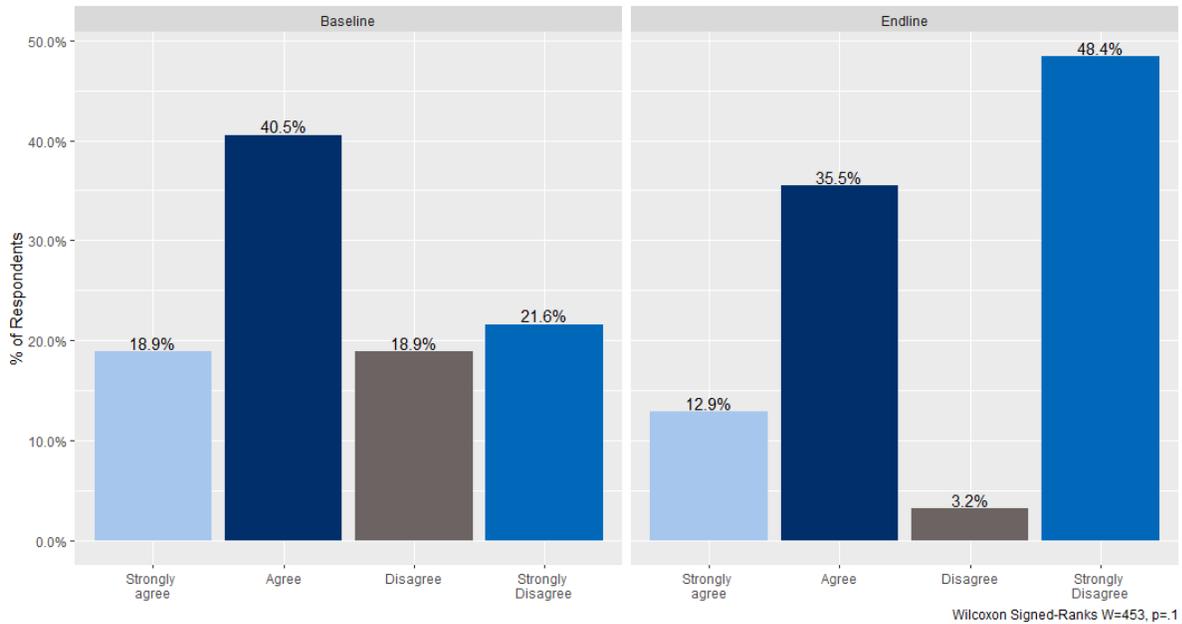
Presenteeism: We measured presenteeism through six 5-point Likert Scale questions. Total score ranged from 0-24. Women were asked whether they agreed with the following statement “Because of your menstrual period, the stresses of your job were much harder to handle.” The score ranged from 0 (Strongly disagree) to 4 (Strongly agree).



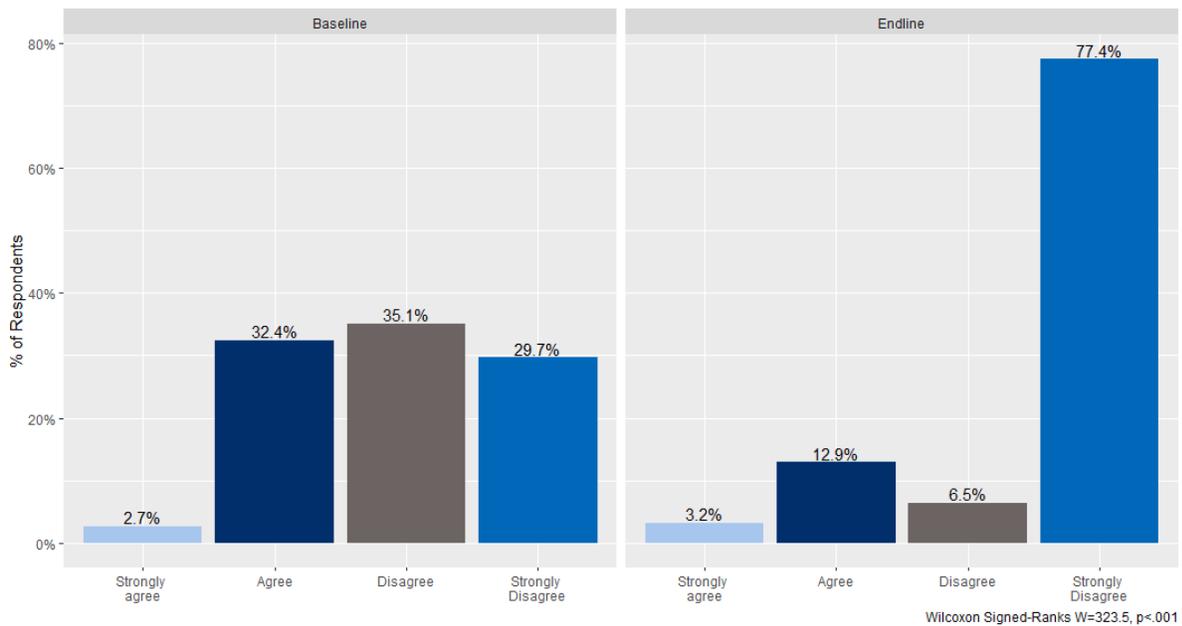
Women were asked whether they agreed with the following statement “Despite having your menstrual period, you were able to finish hard tasks in your work.” The score ranged from 4 (Strongly disagree) to 0 (Strongly agree).



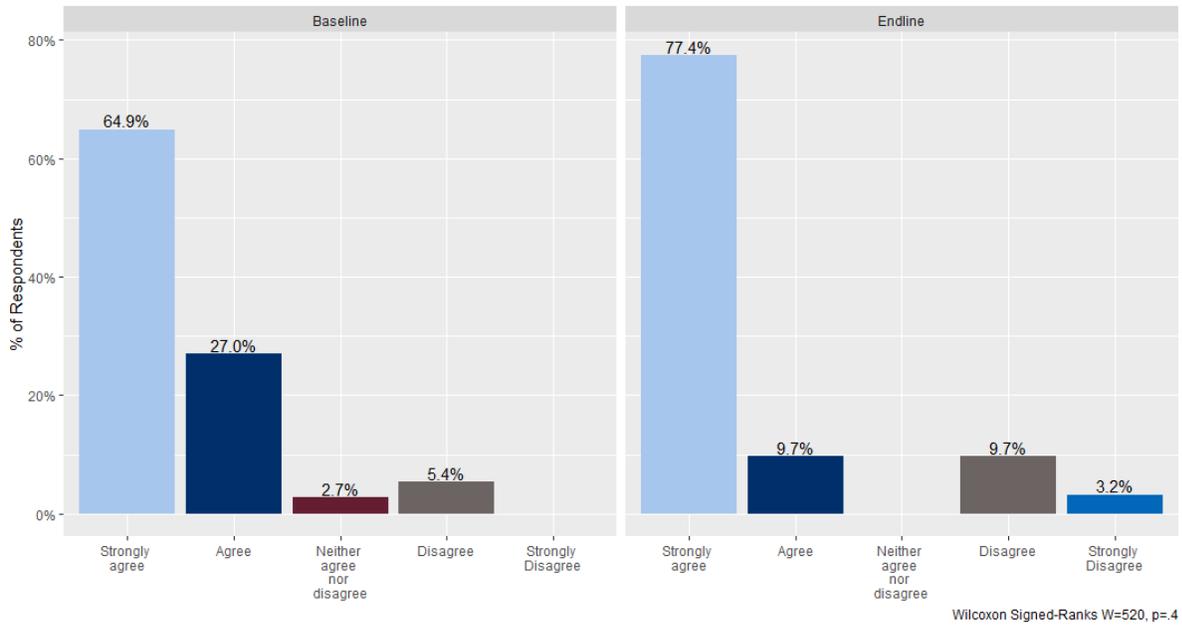
Women were asked whether they agreed with the following statement “Your menstrual period distracted you from taking pleasure in your work.” The score ranged from 0 (Strongly disagree) to 4 (Strongly agree).



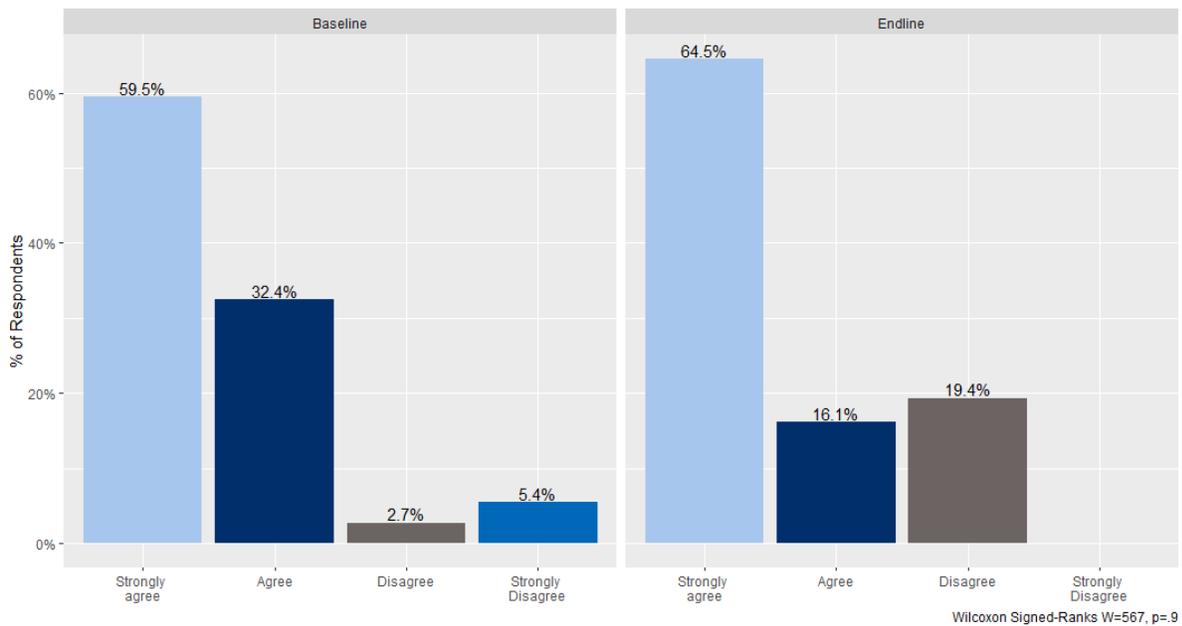
Women were asked whether they agreed with the following statement “You felt hopeless about finishing certain tasks at work, due to your menstrual period.” The score ranged from 0 (Strongly disagree) to 4 (Strongly agree).



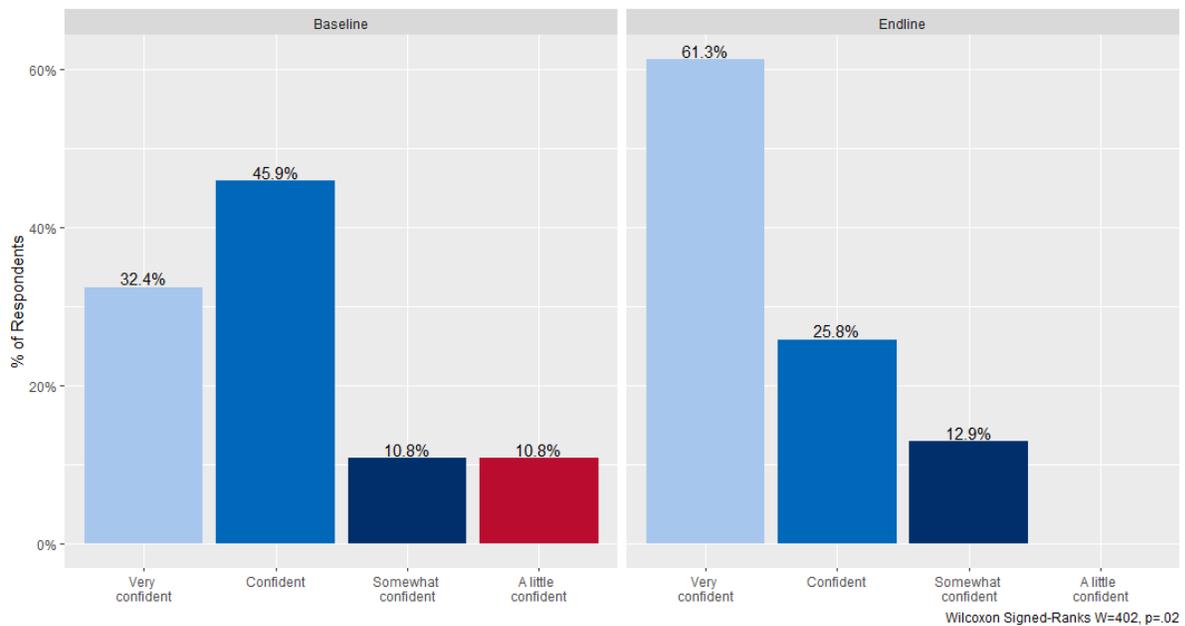
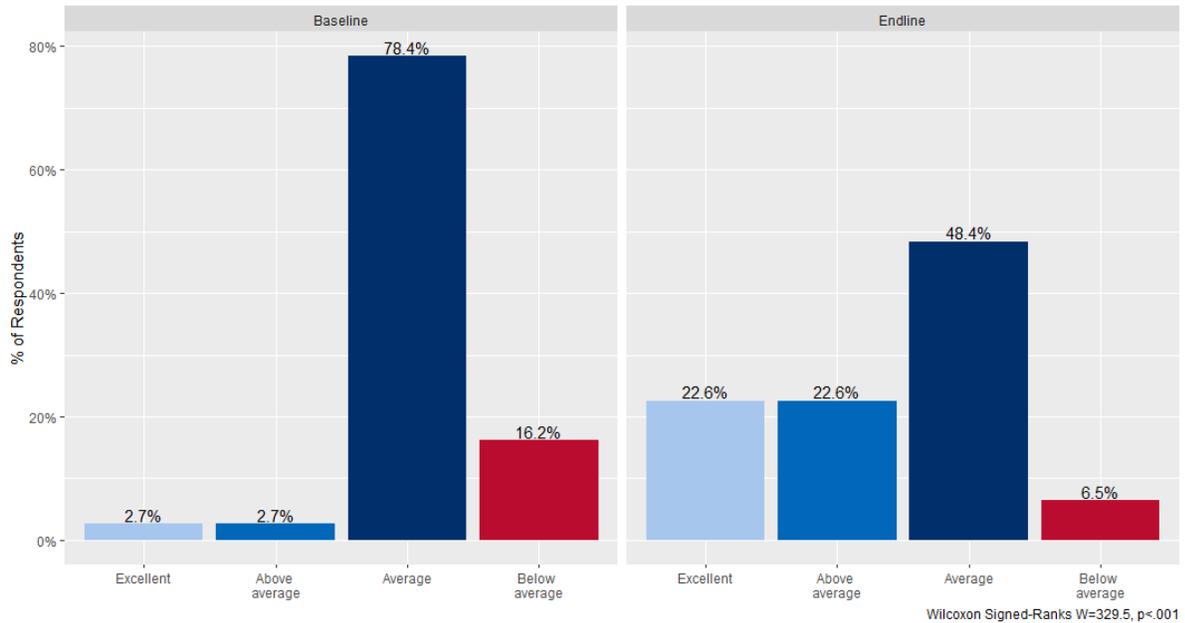
Women were asked whether they agreed with the following statement “At work, you were able to focus on achieving your goals despite your menstrual period.” The score ranged from 0 (Strongly agree) to 4 (Strongly disagree).



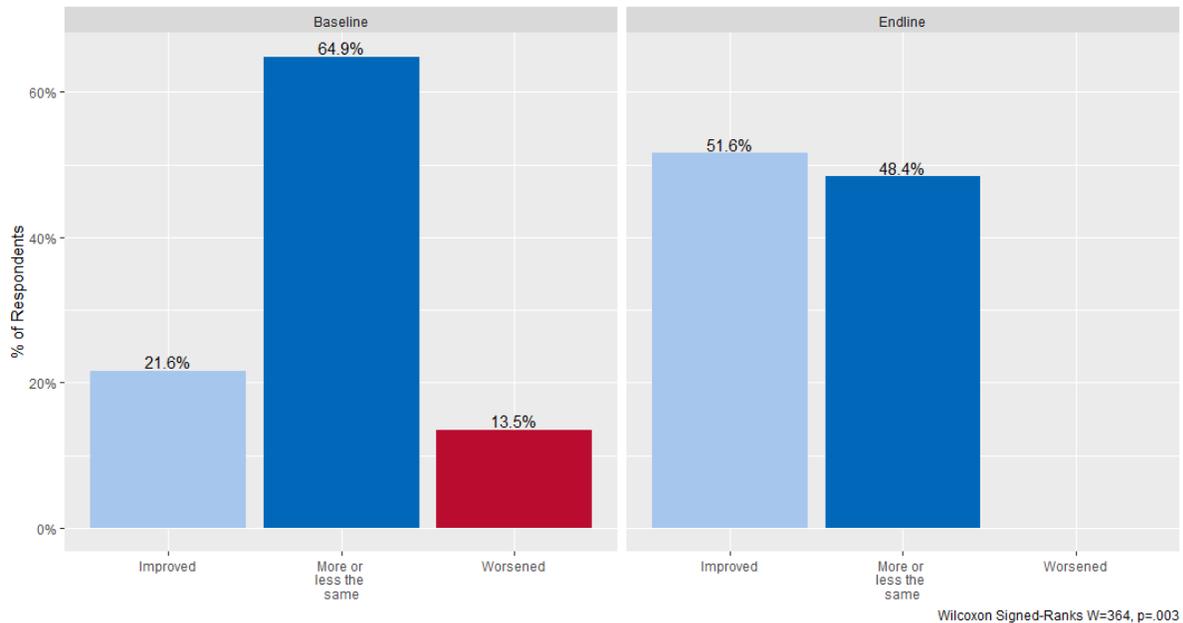
Women were asked whether they agreed with the following statement “Despite having your menstrual period, you felt energetic enough to complete all your work.” The score ranged from 0 (Strongly agree) to 4 (Strongly disagree).



Self-efficacy: We measured self-efficacy through two 5-point Likert Scale questions. Women were asked “How would you rate the quality of your work while on your period?” and “How confident do you feel that you can meet your personal production targets on time while on your period at work?” Scores ranged from 1 (Very poor; Not at all confident) to 5 (Excellent; Very confident), with a total score range of 2-10.

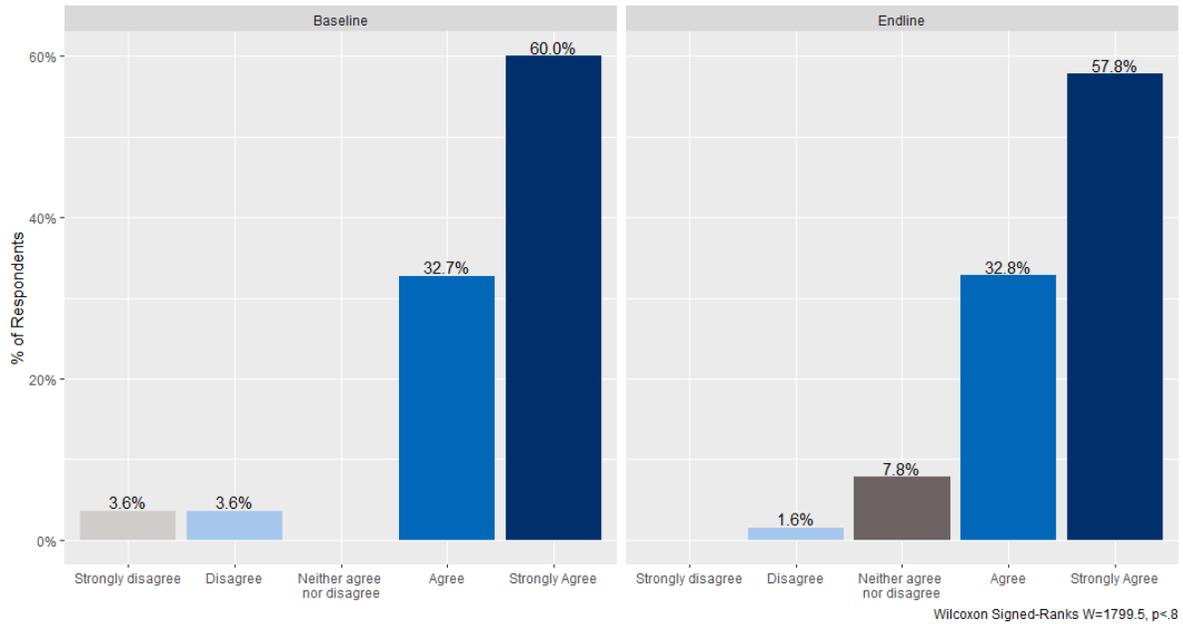


Job satisfaction: We measured job satisfaction through a 3-point Likert Scale question. Women were asked “Compared to this time last year, would you say your satisfaction with your job has improved, stayed more or less the same, or worsened, overall?” Scores ranged from 2 (Improved) to 0 (Worsened).

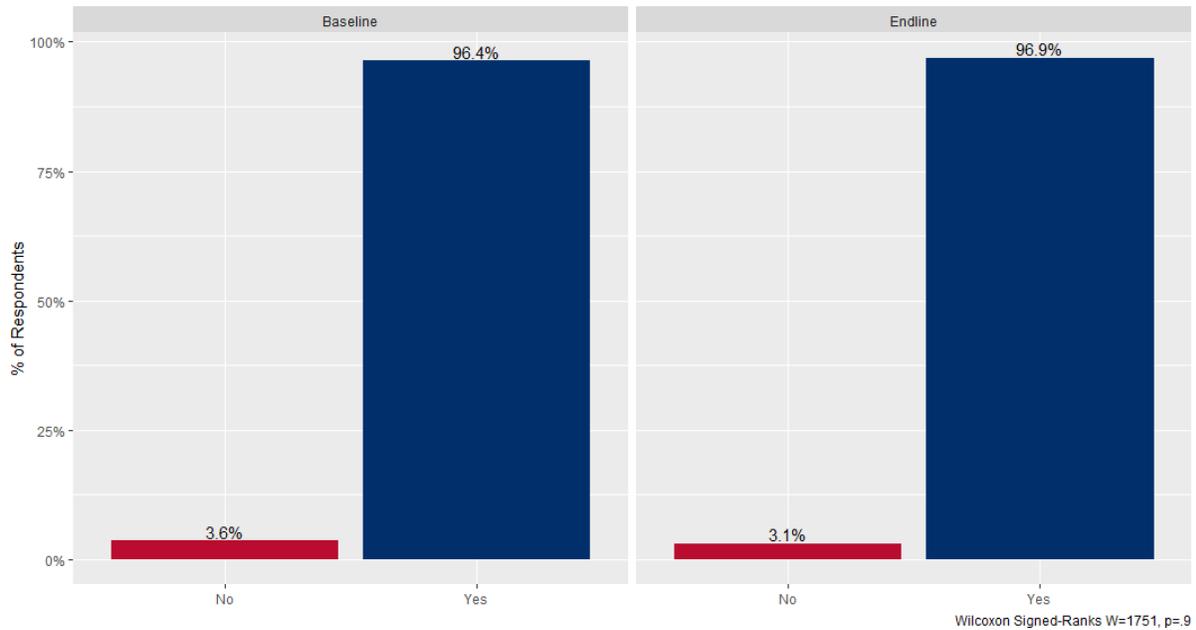


NEPAL COMPANY B

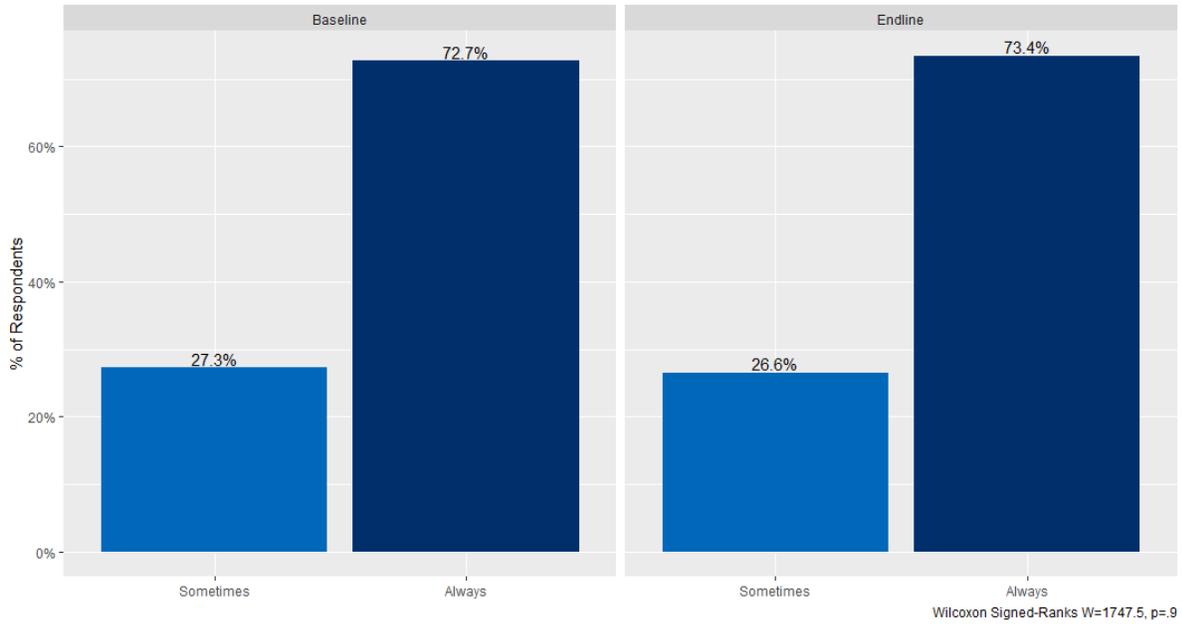
Confidence managing menstruation: We measured confidence managing menstruation with a 5-point Likert Scale question. Women were asked whether they agreed with the following statement: “I feel confident to manage my menstrual period at work, including changing, disposing, or washing material.” Scores ranged from 1 (Strongly disagree) to 5 (Strongly agree).



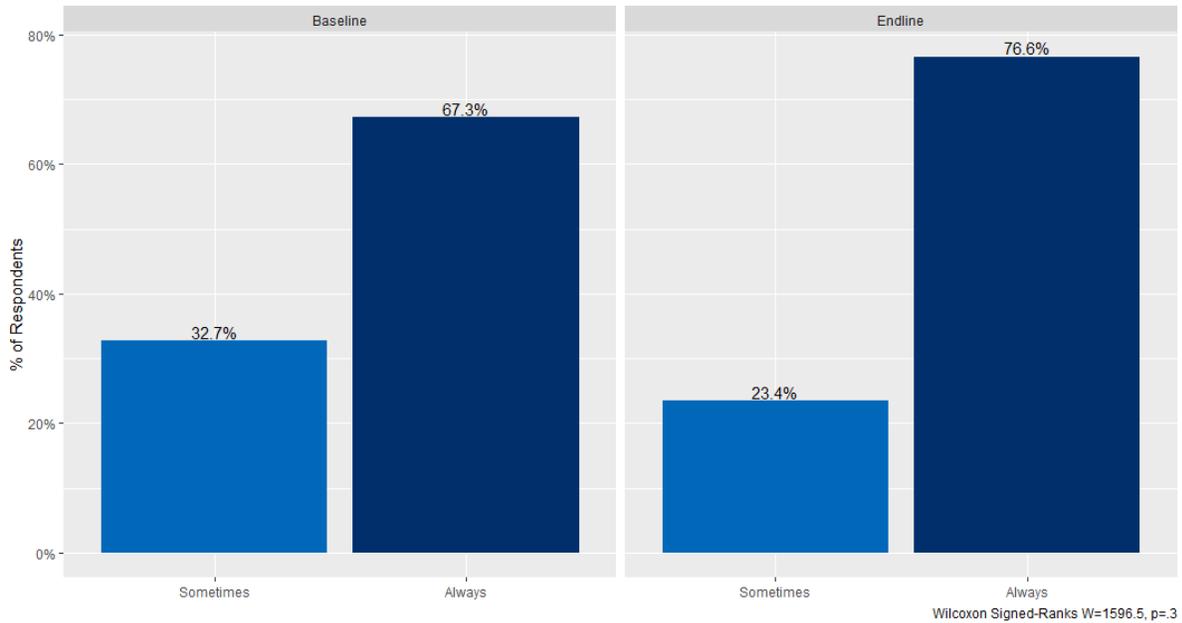
Adequate MHM: We measured access to materials with a dichotomous question. Women were asked “Did you have access to the materials you needed for managing your last menstrual period?” (Yes/No)



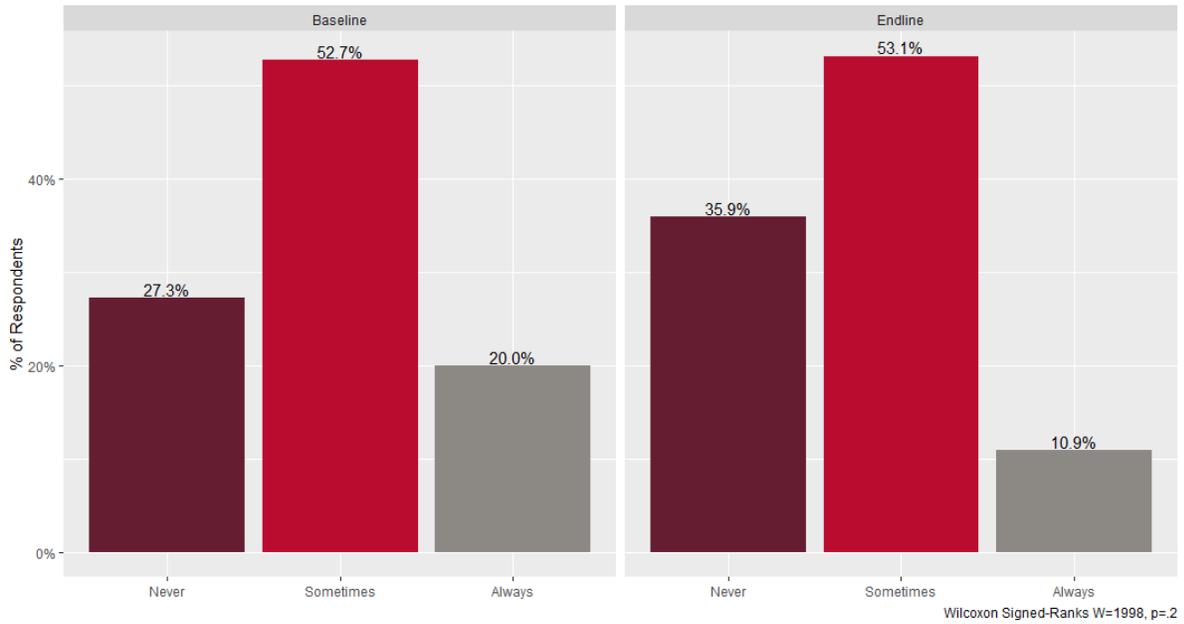
We measured satisfaction with quality and supply of menstrual materials using seven 3-point Likert Scale questions. Scores for each question ranged from 2 (Always) to 0 (Never), with a total score range of 0-14. Women were asked “How often did you have enough of your menstrual materials to change them when you wanted to?”



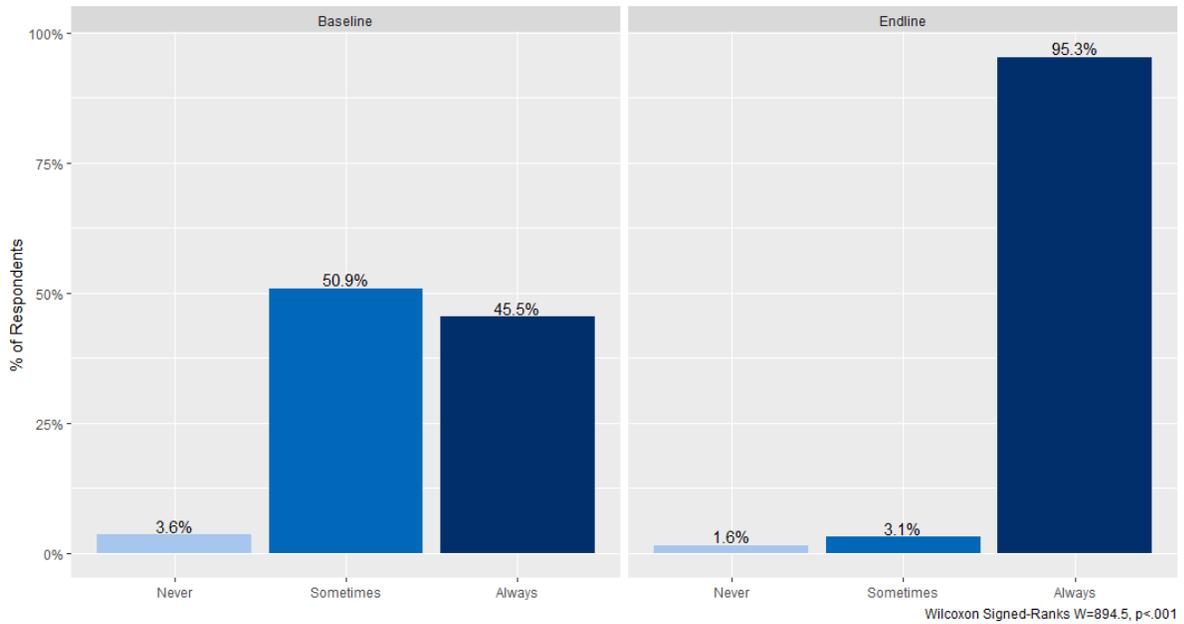
Women were asked “How often did you get more menstrual materials when you needed to?”



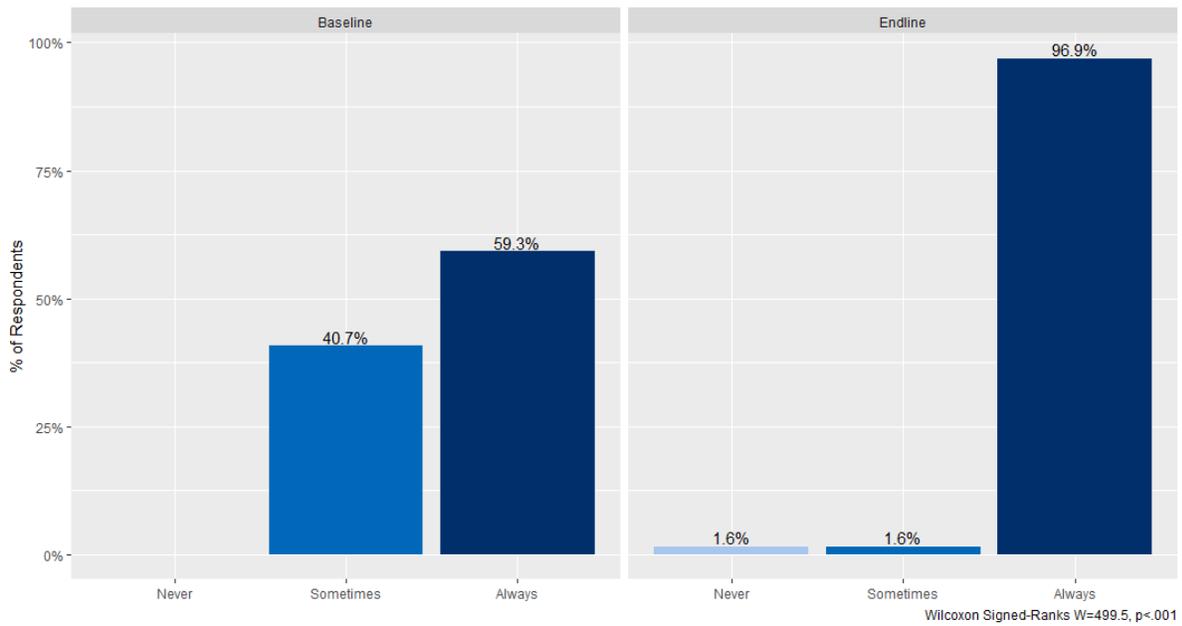
Women were asked “How often did you worry about how you would get more menstrual materials at work if you ran out?”



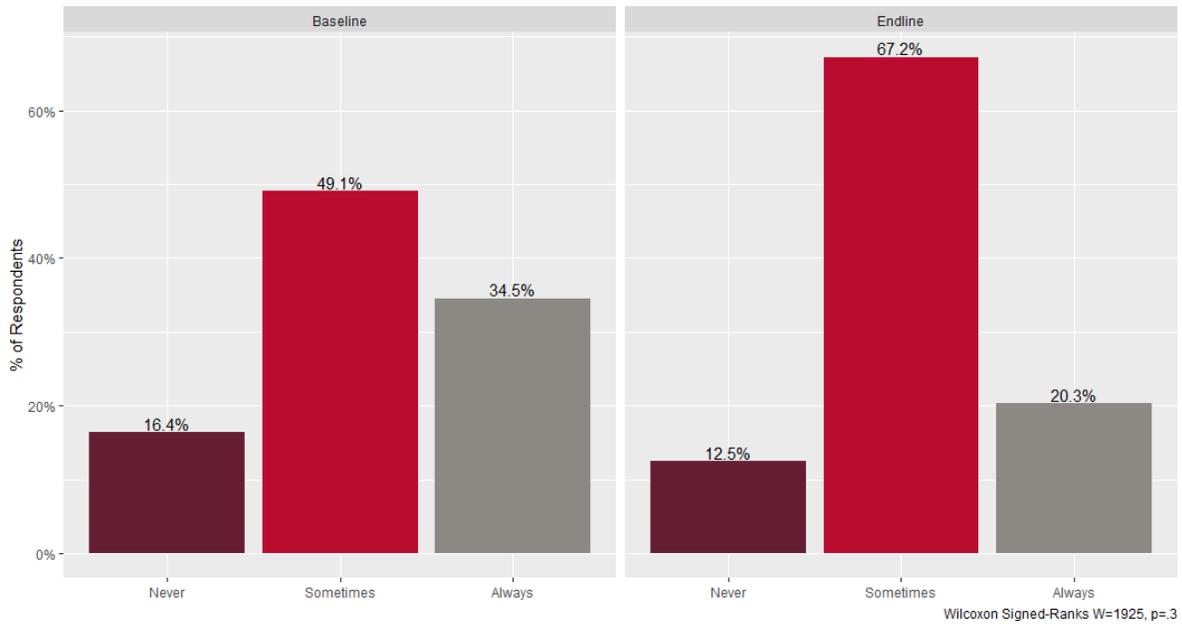
Women were asked “How often did you feel that your menstrual materials were comfortable?”



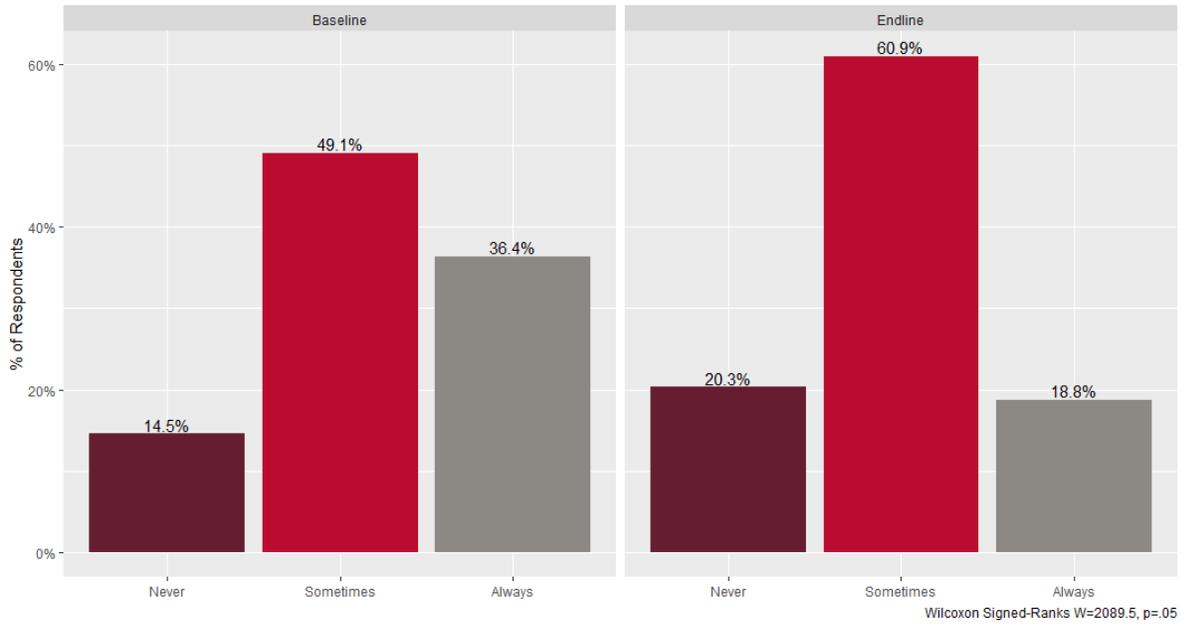
Women were asked “How often were you satisfied with the cleanliness of your menstrual materials?”



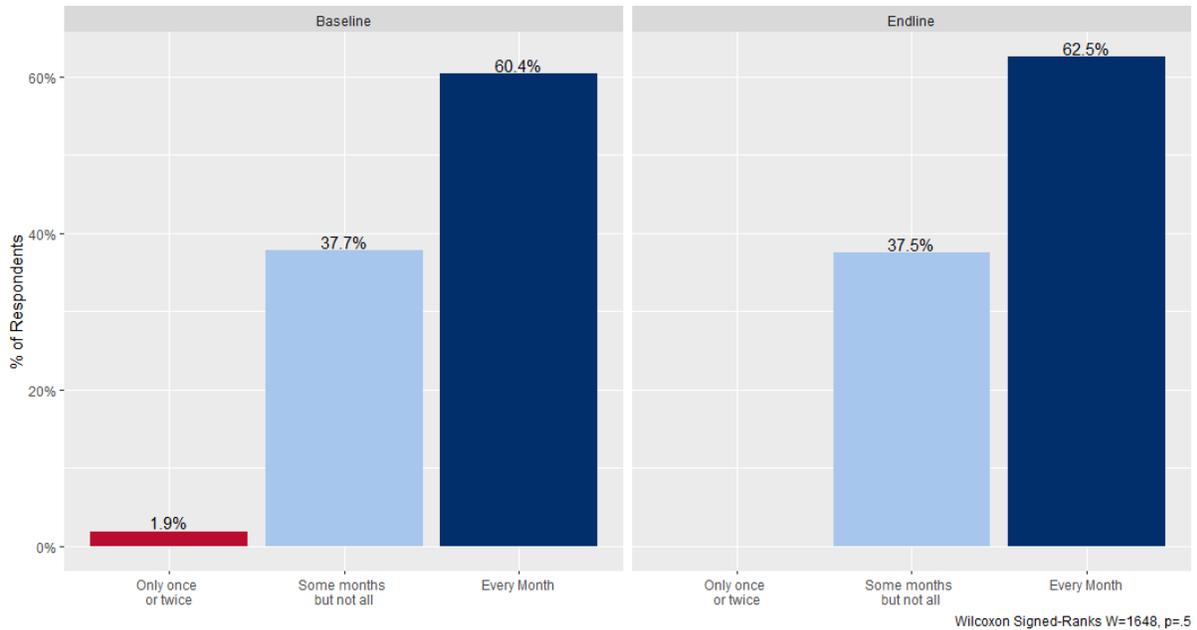
Women were asked “How often did you worry that your menstrual materials would allow blood to pass through to your garments?”



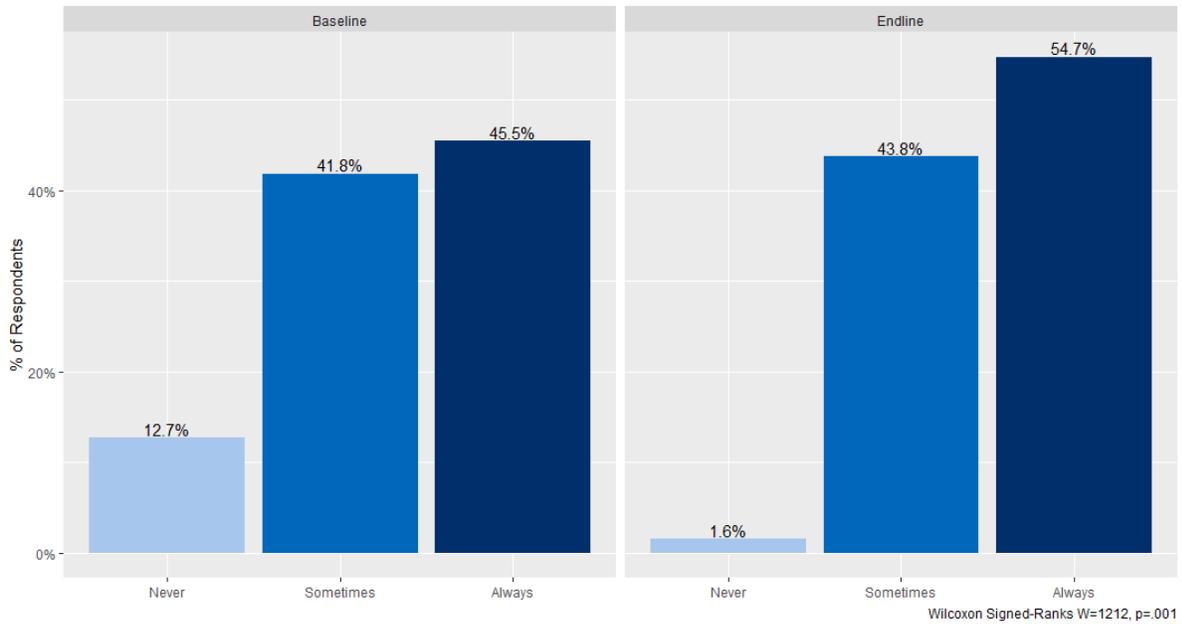
Women were asked “How often did you worry that your menstrual materials would move from place while you were wearing them?”



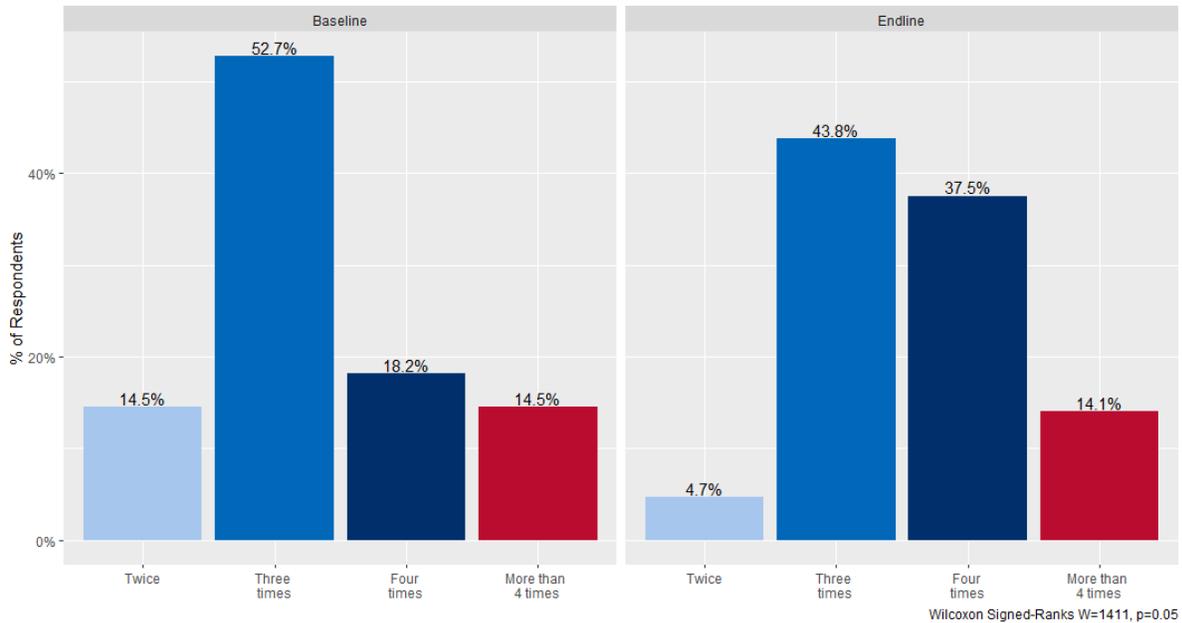
Affordability of menstrual materials: We measured affordability of menstrual materials with a 4-point Likert Scale question. Women were asked “During the last 11 months, how often did you have money to purchase menstrual materials?” Scores ranged from 3 (Every month) to 0 (Never).



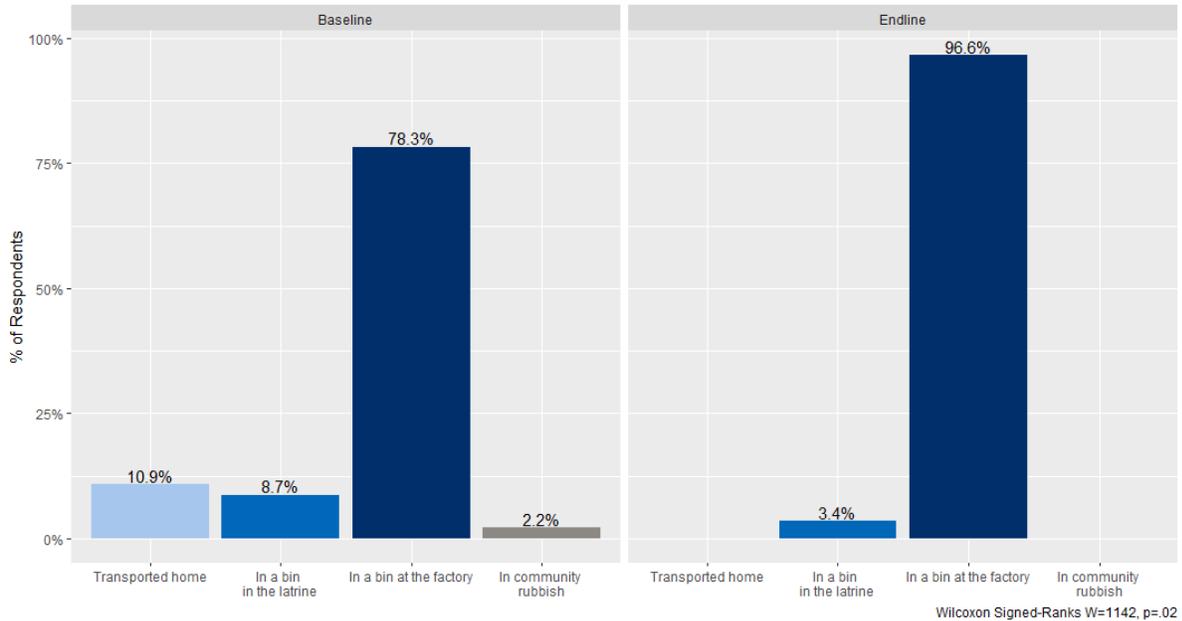
Changing menstrual materials: We measured possibility to change menstrual materials with a 3-point Likert Scale question. Women were asked “How often were you able to change your menstrual materials when you wanted to?” Scores ranged from 2 (Always) to 0 (Never).



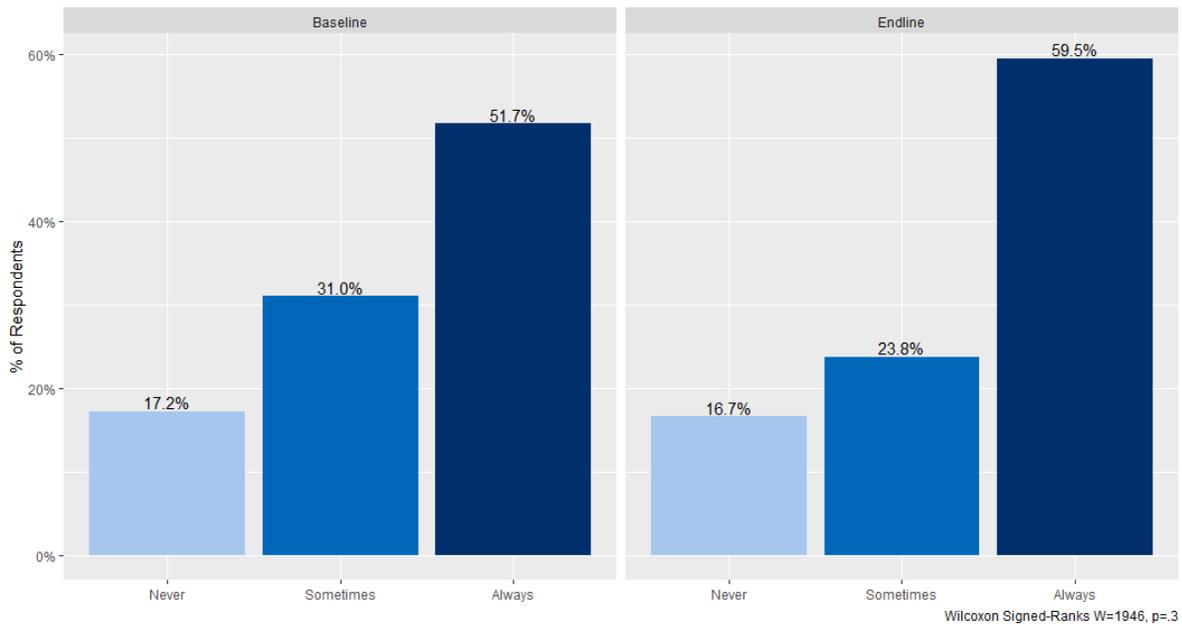
Women were asked “How many times did you change your menstrual products on the heaviest day of your period?”



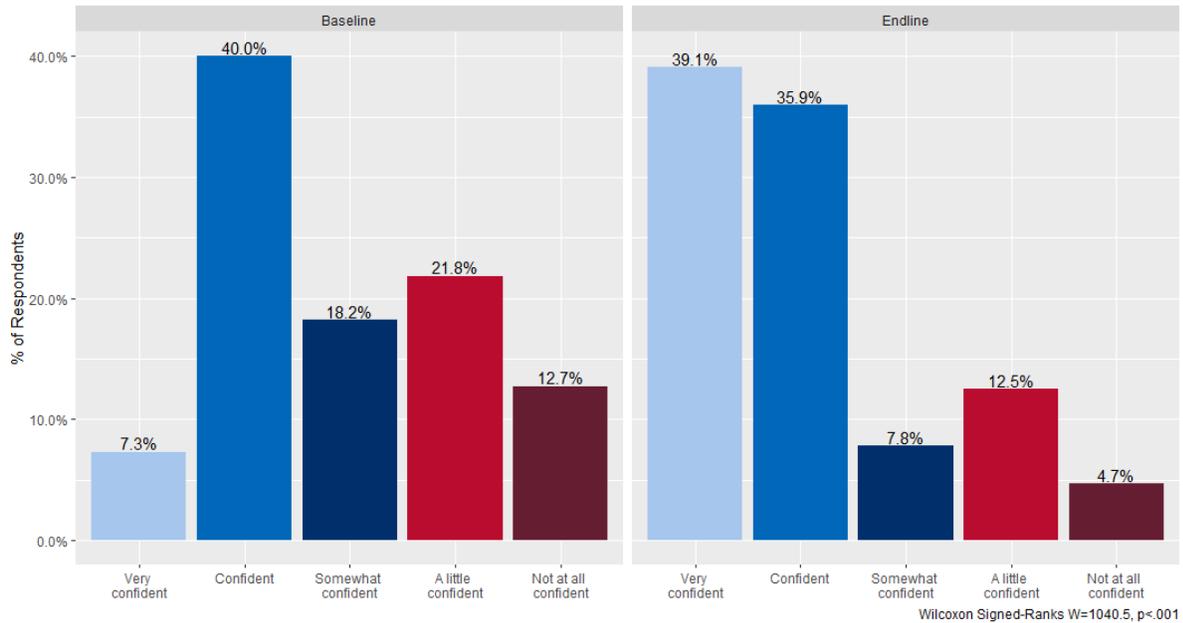
Disposal: Women were asked “Where did you most often dispose of your used menstrual materials? In the latrine or toilet; In a bin in the latrine; In a bin at the factory, but outside of the latrine or toilet; In community rubbish (not at the factory); In a bush, waterway or buried; Burned; Transported used materials home to dispose of or reuse”



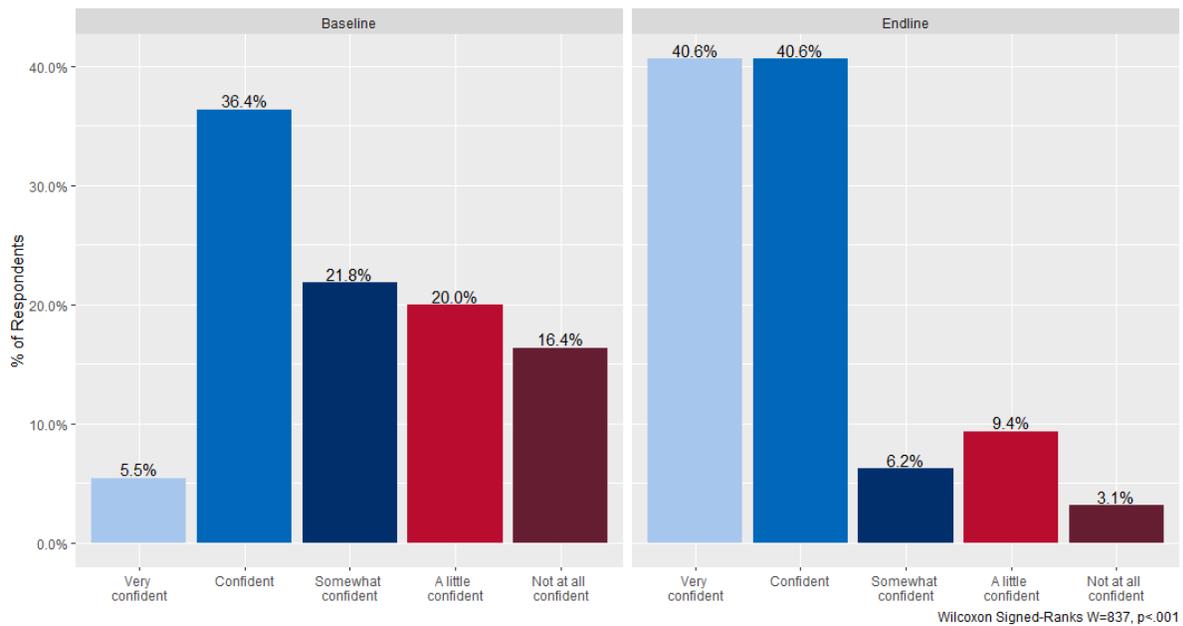
Storage: We measured storage through a 3-point Likert Scale questions. Women were asked “Did you feel comfortable carrying spare menstrual products with you to work?” Scores ranged from 2 (Always) to 0 (Never), with a total score range of 0-2.



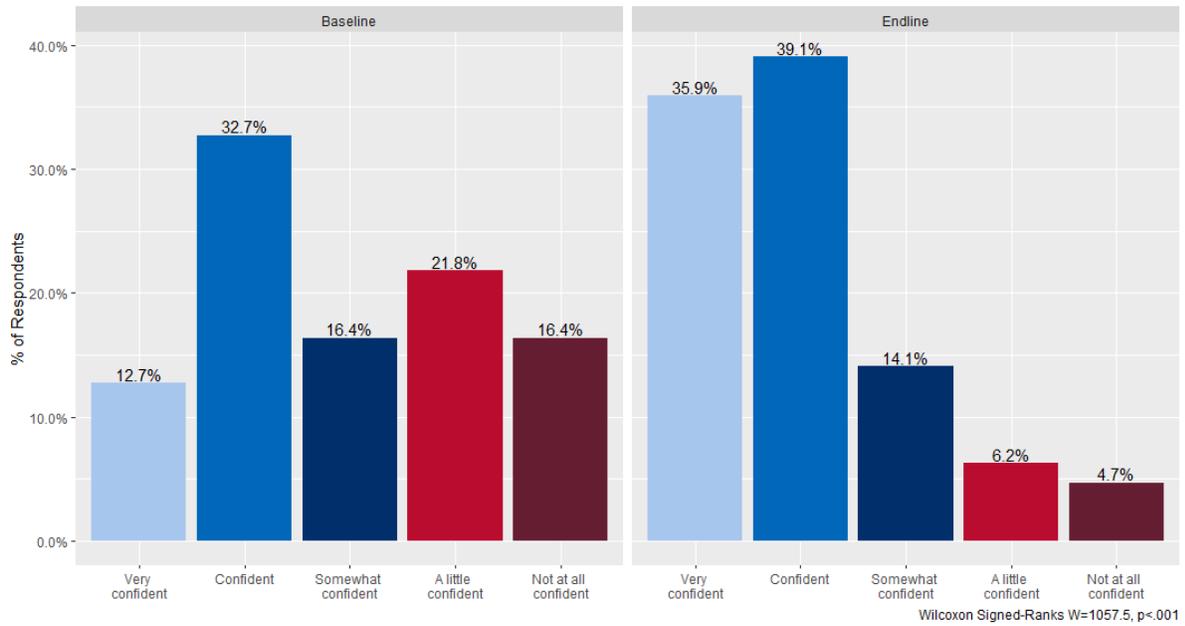
Support at work: We measured support at work with four 5-point Likert Scale questions and one 3-point Likert Scale questions. Scores ranged from 1 (Not at all confident) to 5 (Very confident) for the first four questions, and from 0 (Not at all) to 2 (To a large extent) for the last question, with a total score range of 4-22. Women were asked “If you need advice about how to manage your period, how confident do you feel asking a colleague or another staff member?”



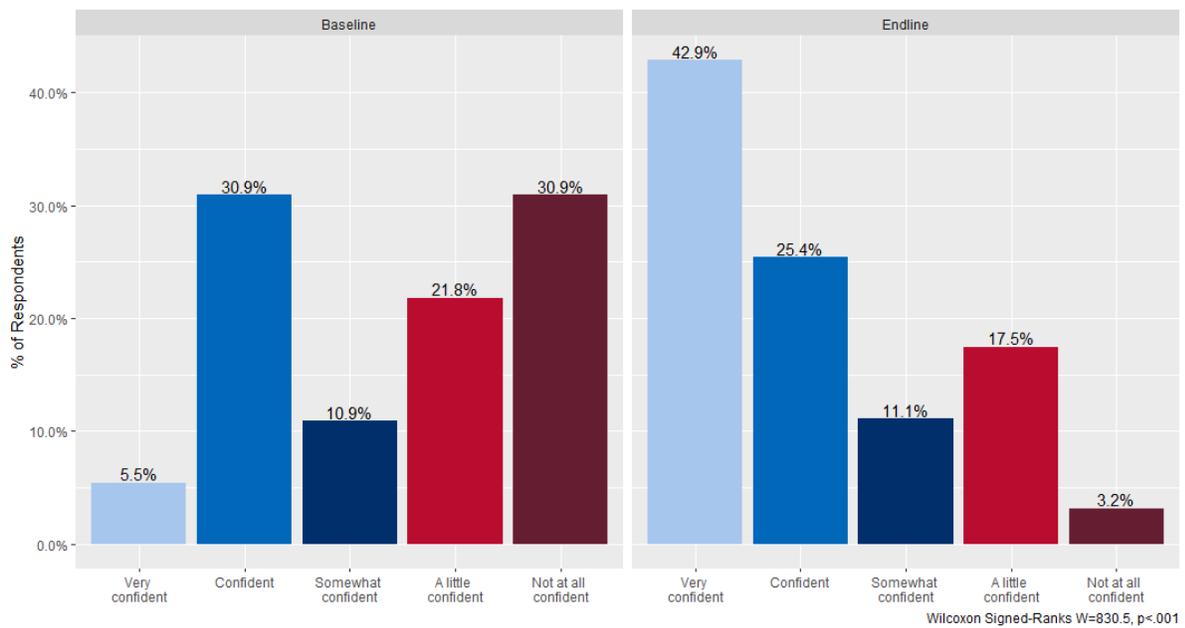
Women were asked “How confident do you feel asking a colleague or another staff member for menstrual materials if you need some (e.g., sanitary pad)?”



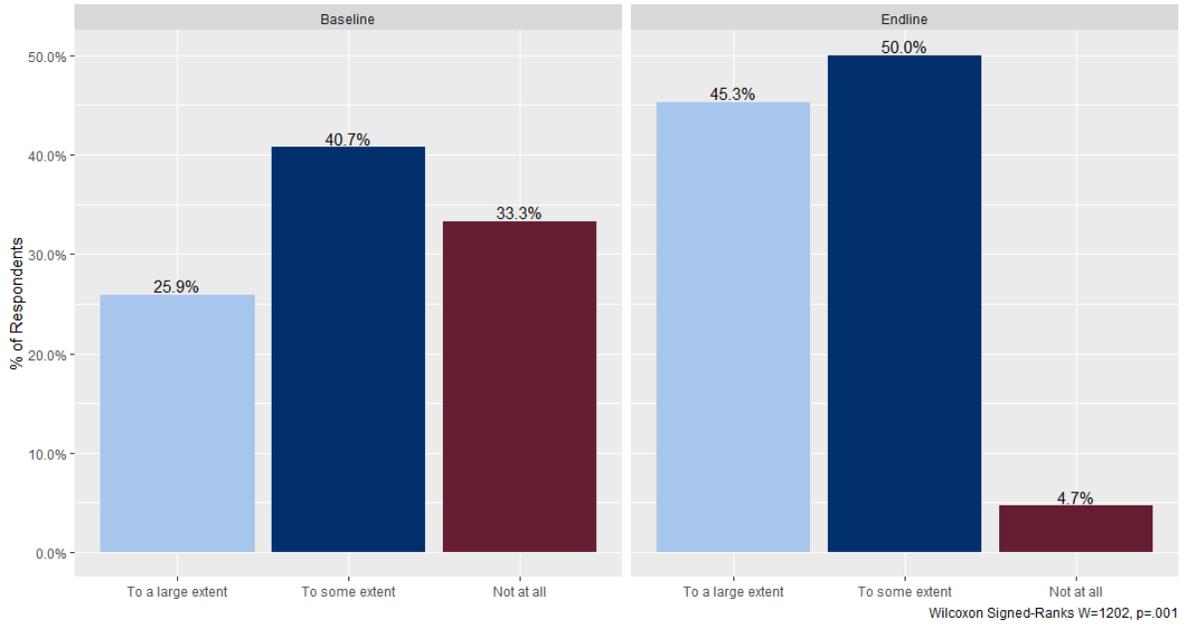
Women were asked “How confident do you feel asking a colleague or another staff member for pain management products or resources?”



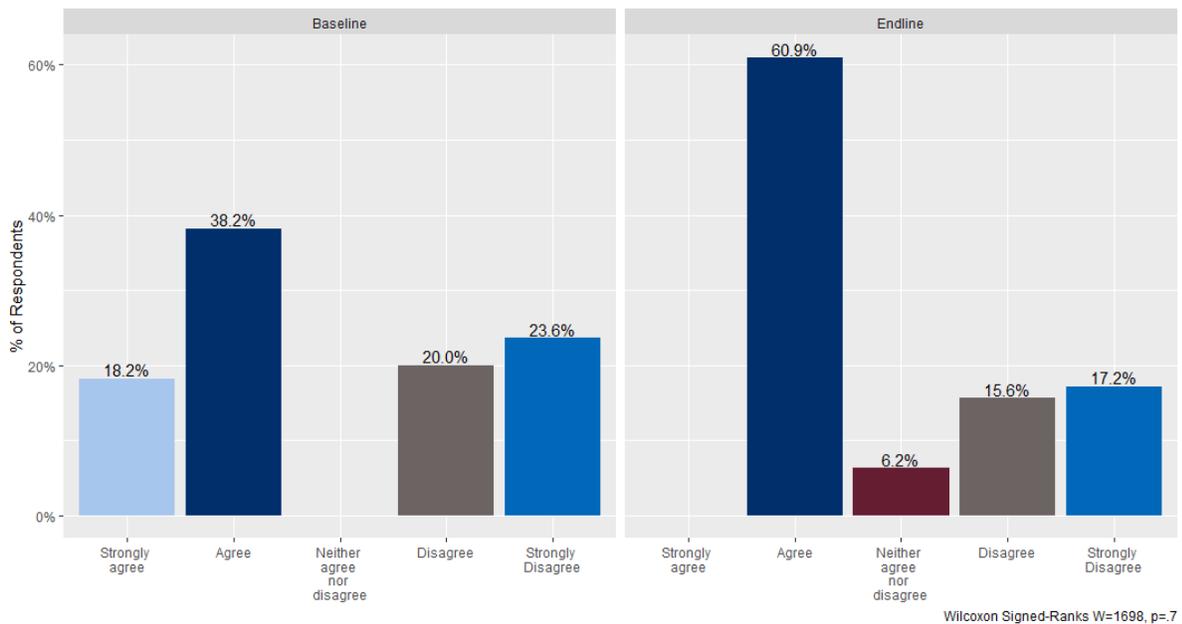
Women were asked “How confident do you feel reporting someone who bullied/teased/harassed you about menstruation to a supervisor or manager?”



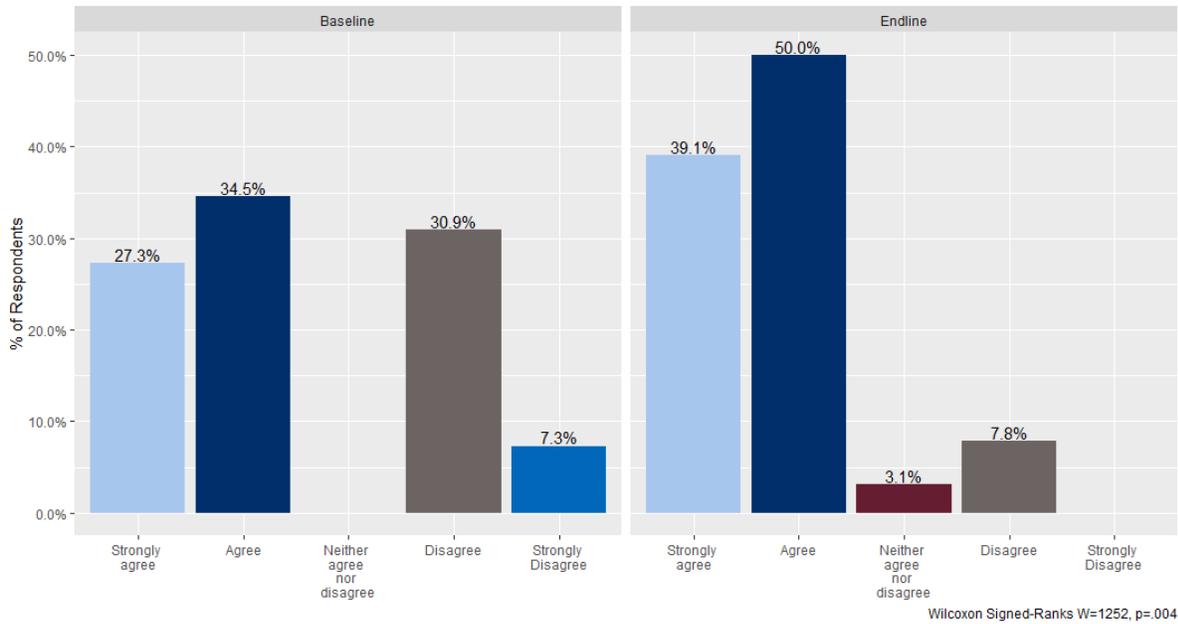
Women were asked “Do you feel comfortable telling your supervisors that you need to leave work for menstruation-related reasons?”



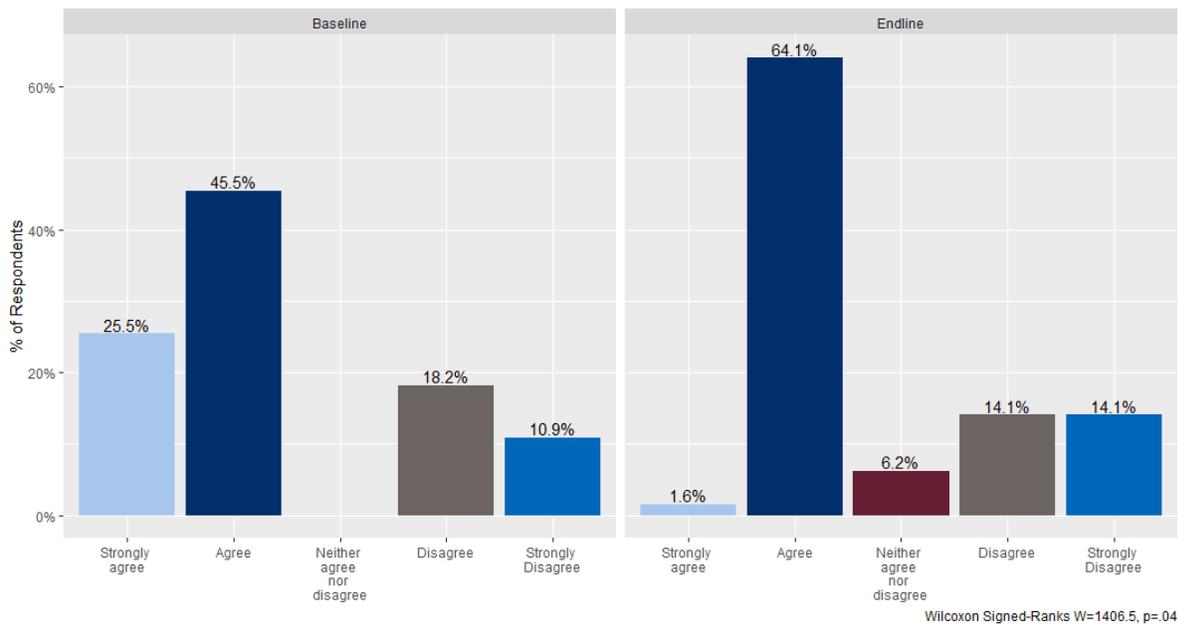
Presenteeism: We measured presenteeism through six 5-point Likert Scale questions. Total score ranged from 0-24. Women were asked whether they agreed with the following statement “Because of your menstrual period, the stresses of your job were much harder to handle.” The score ranged from 0 (Strongly disagree) to 4 (Strongly agree).



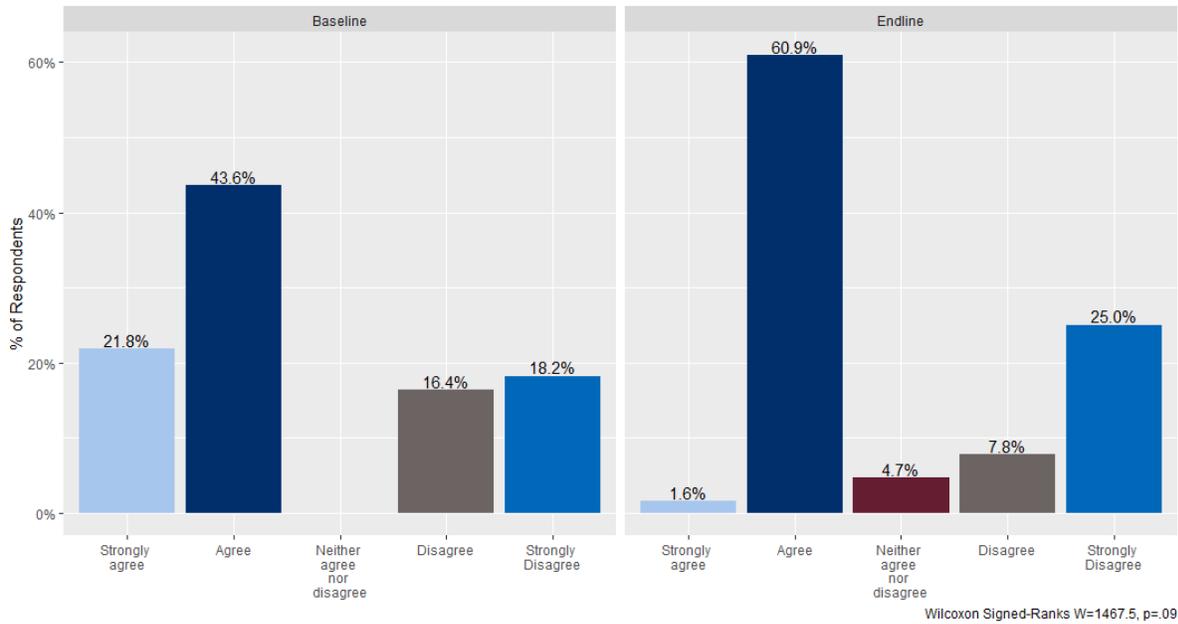
Women were asked whether they agreed with the following statement “Despite having your menstrual period, you were able to finish hard tasks in your work.” The score ranged from 0 (Strongly agree) to 4 (Strongly disagree).



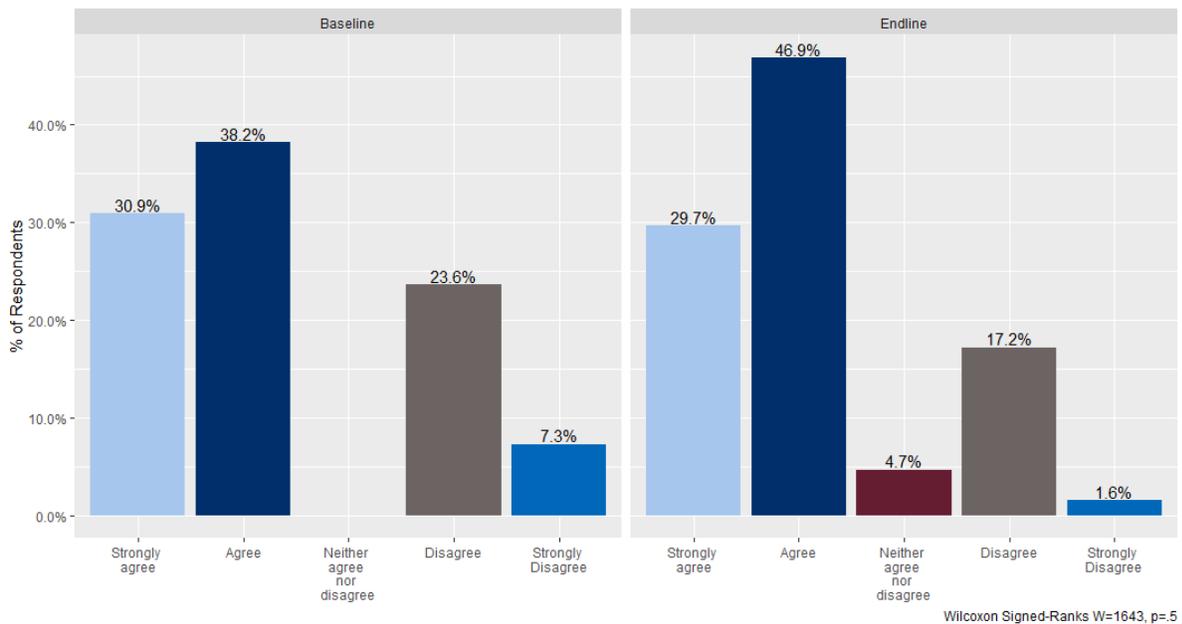
Women were asked whether they agreed with the following statement “Your menstrual period distracted you from taking pleasure in your work.” The score ranged from 0 (Strongly disagree) to 4 (Strongly agree).



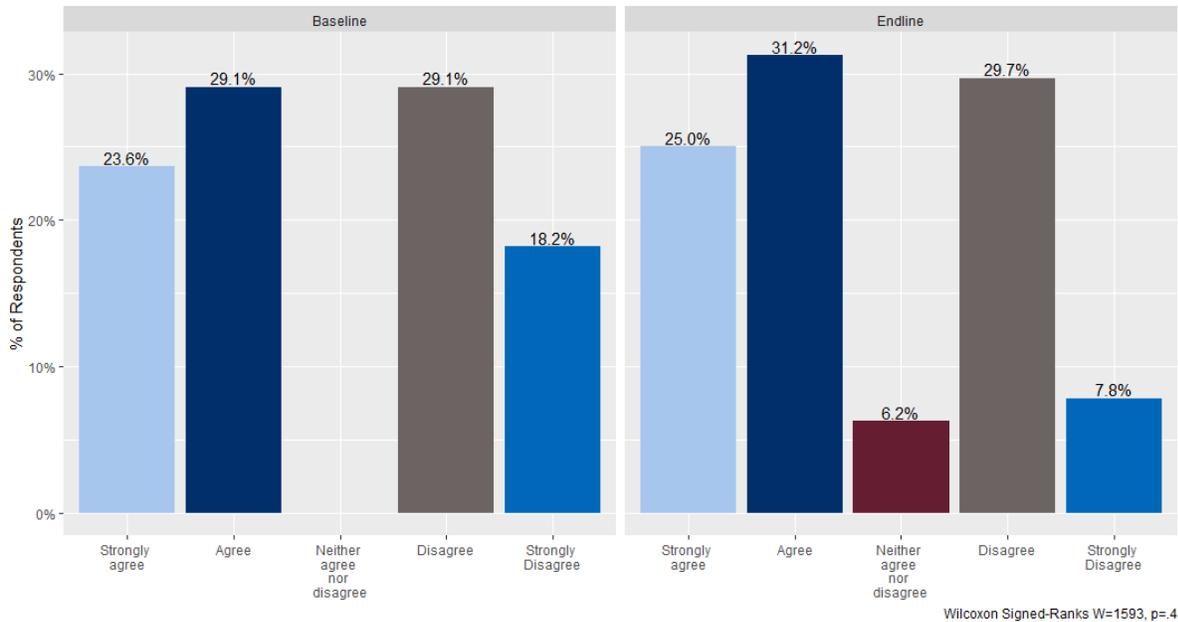
Women were asked whether they agreed with the following statement “You felt hopeless about finishing certain tasks at work, due to your menstrual period.” The score ranged from 0 (Strongly disagree) to 4 (Strongly agree).



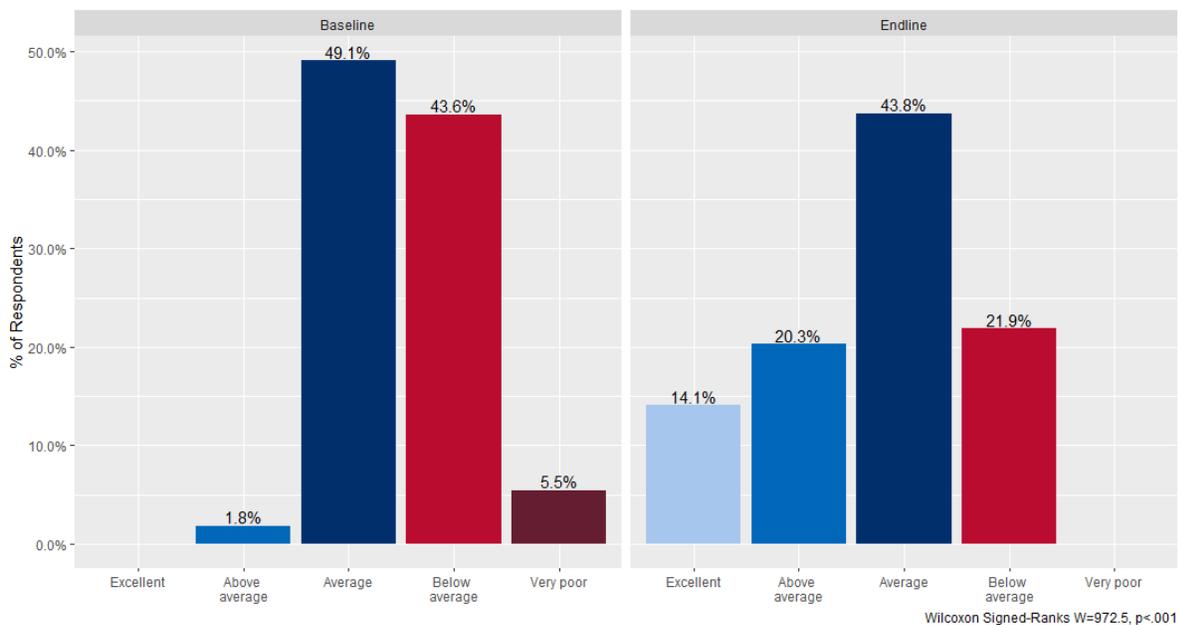
Women were asked whether they agreed with the following statement “At work, you were able to focus on achieving your goals despite your menstrual period.” The score ranged from 0 (Strongly agree) to 4 (Strongly disagree).

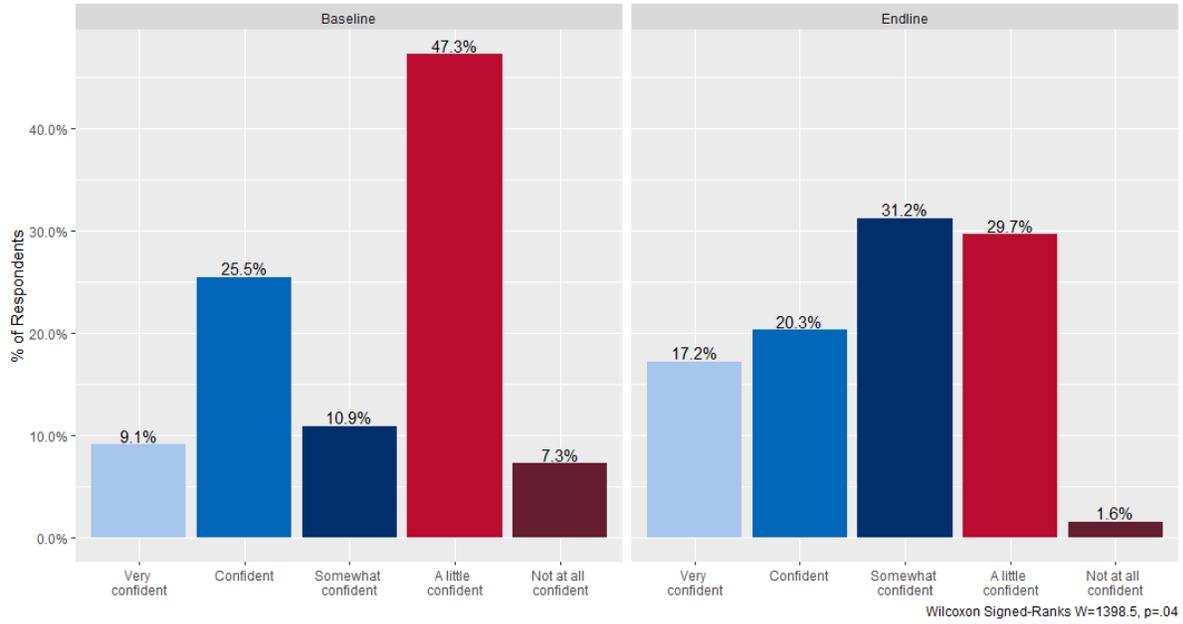


Women were asked whether they agreed with the following statement “Despite having your menstrual period, you felt energetic enough to complete all your work.” The score ranged from 0 (Strongly agree) to 4 (Strongly disagree).

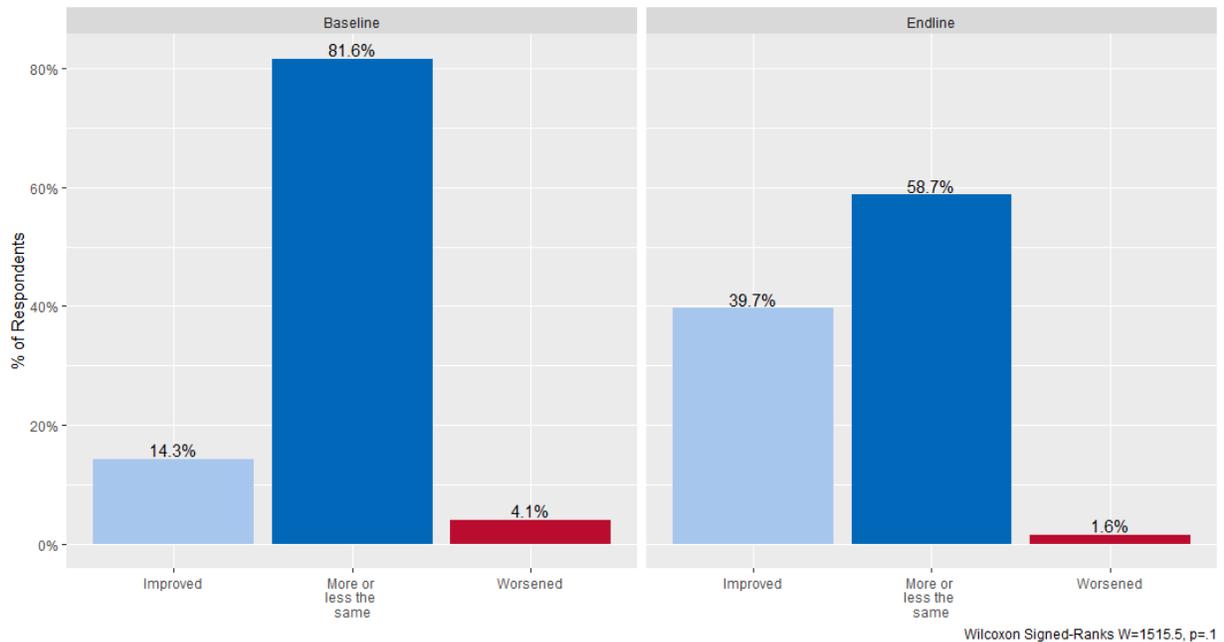


Self-efficacy: We measured self-efficacy through two 5-point Likert Scale questions. Women were asked “How would you rate the quality of your work while on your period?” and “How confident do you feel that you can meet your personal production targets on time while on your period at work?” Scores ranged from 1 (Very poor; Not at all confident) to 5 (Excellent; Very confident), with a total score range of 2-10.



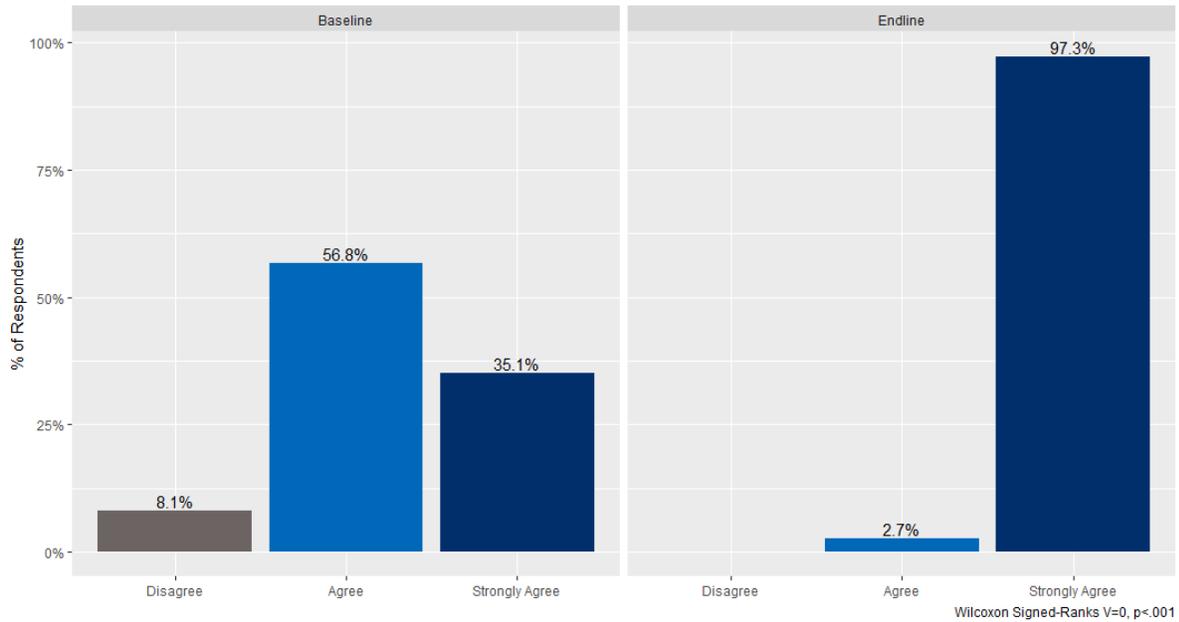


Job satisfaction: We measured job satisfaction through a 3-point Likert Scale question. Women were asked “Compared to this time last year, would you say your satisfaction with your job has improved, stayed more or less the same, or worsened, overall?” Scores ranged from 2 (Improved) to 0 (Worsened).

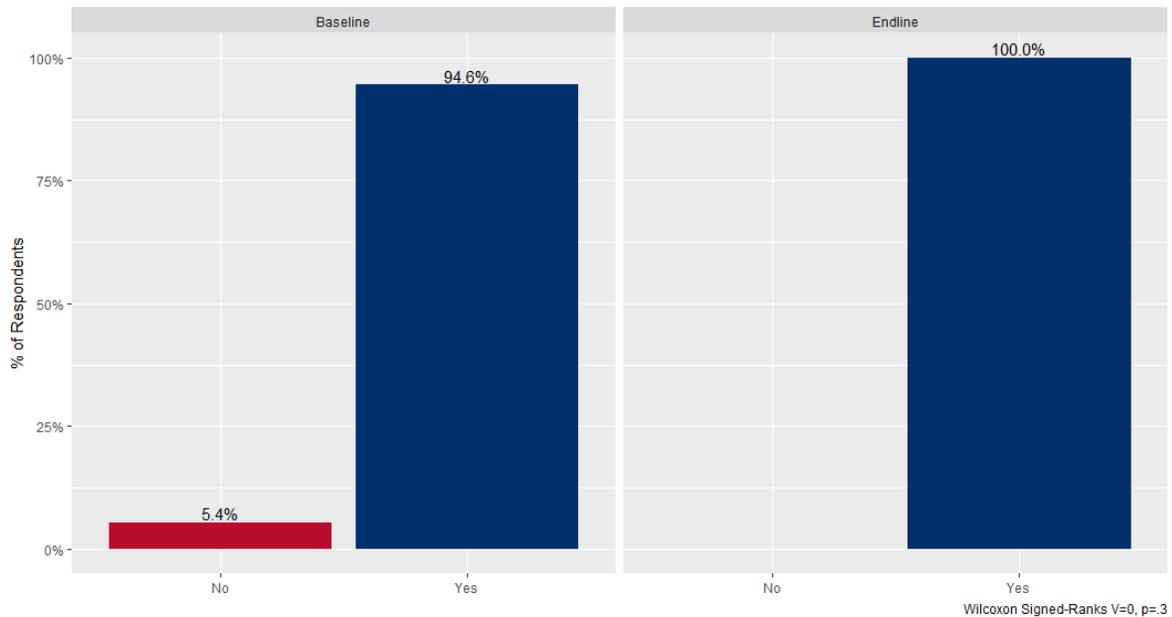


KENYA COMPANY A

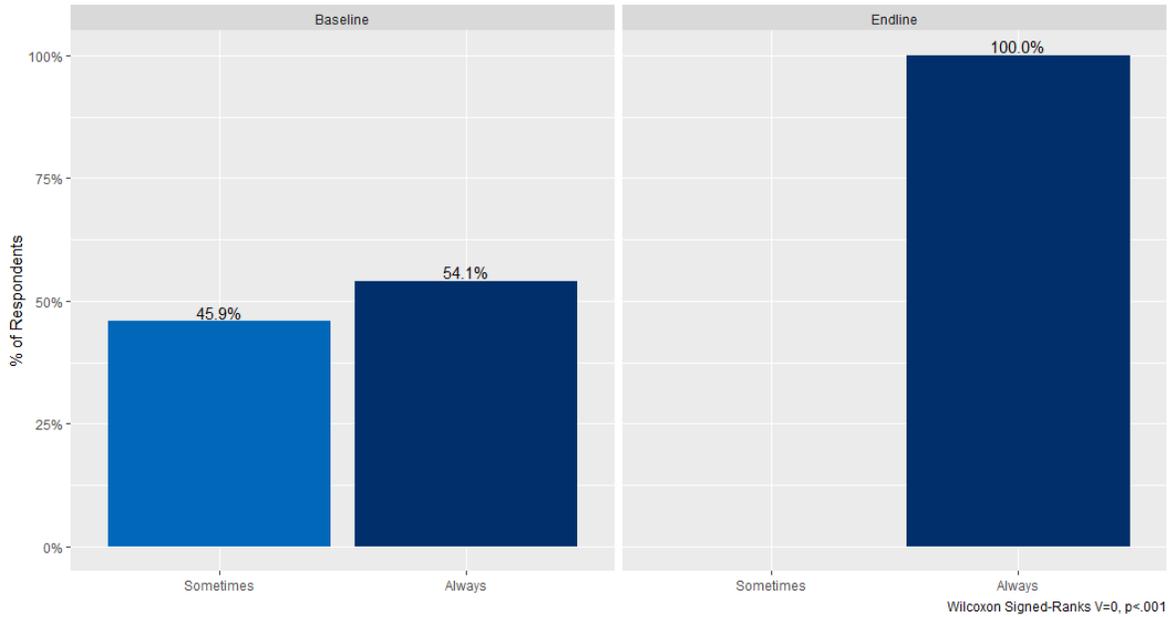
Confidence managing menstruation: We measured confidence managing menstruation with a 5-point Likert Scale question. Women were asked whether they agreed with the following statement: “I feel confident to manage my menstrual period at work, including changing, disposing, or washing material.” Scores ranged from 1 (Strongly disagree) to 5 (Strongly agree).



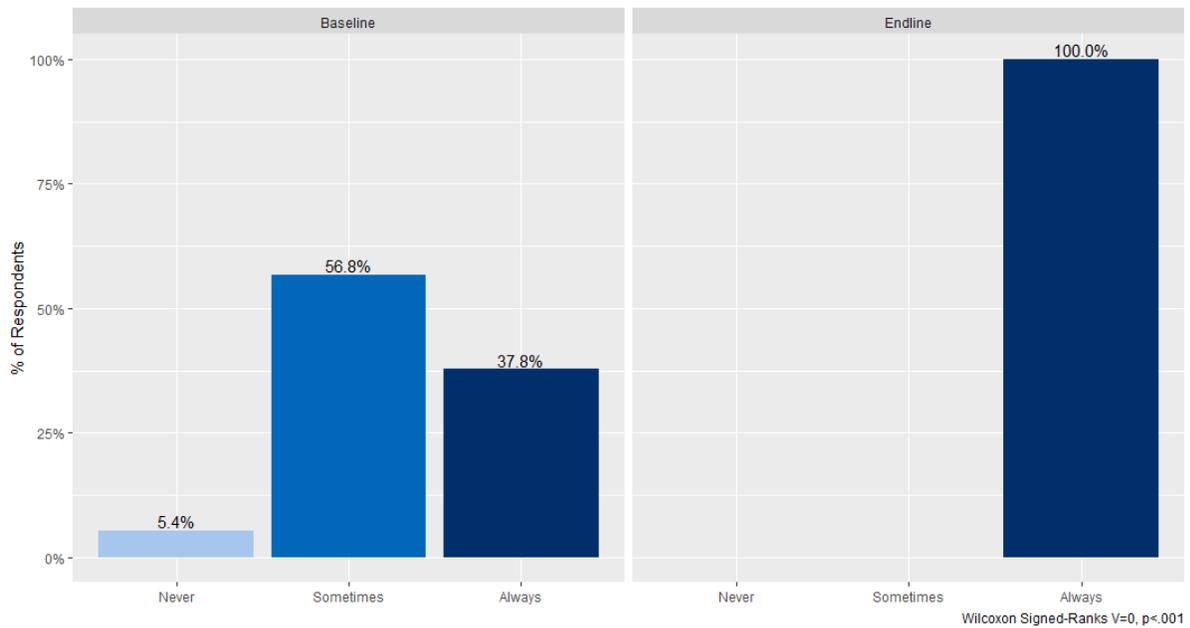
Adequate MHM: We measured access to materials with a dichotomous question. Women were asked “Did you have access to the materials you needed for managing your last menstrual period?” (Yes/No)



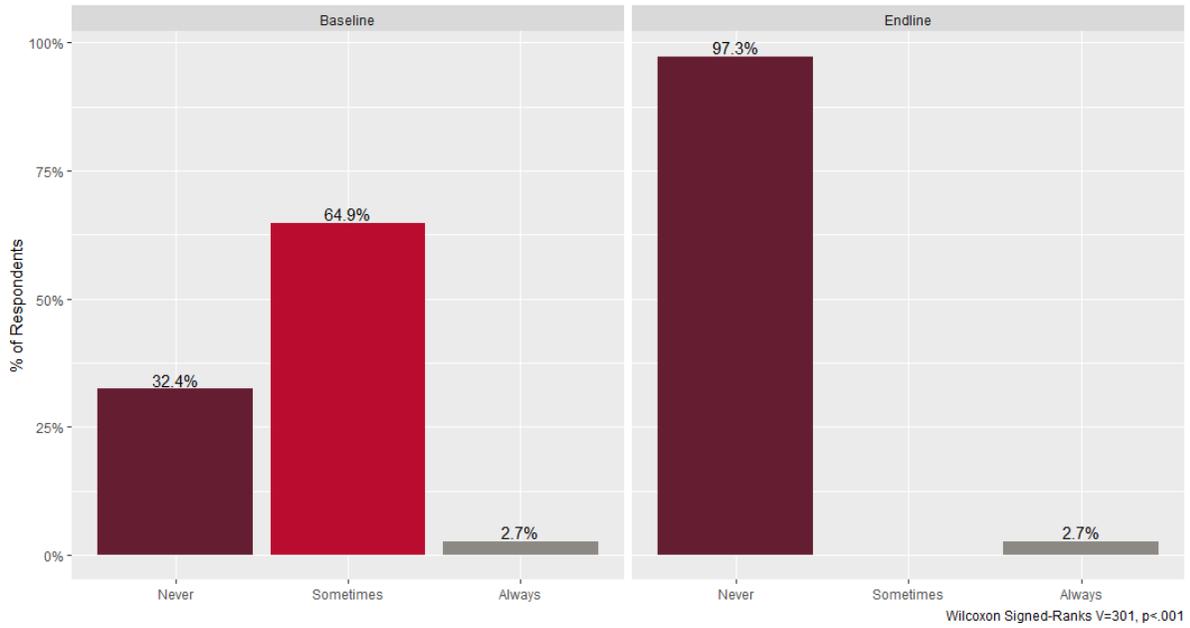
Products: We measured satisfaction with quality and supply of menstrual products using seven 3-point Likert Scale questions. Scores for each question ranged from 2 (Always) to 0 (Never), with a total score range of 0-14. Women were asked “How often did you have enough of your menstrual products to change them when you wanted to?”



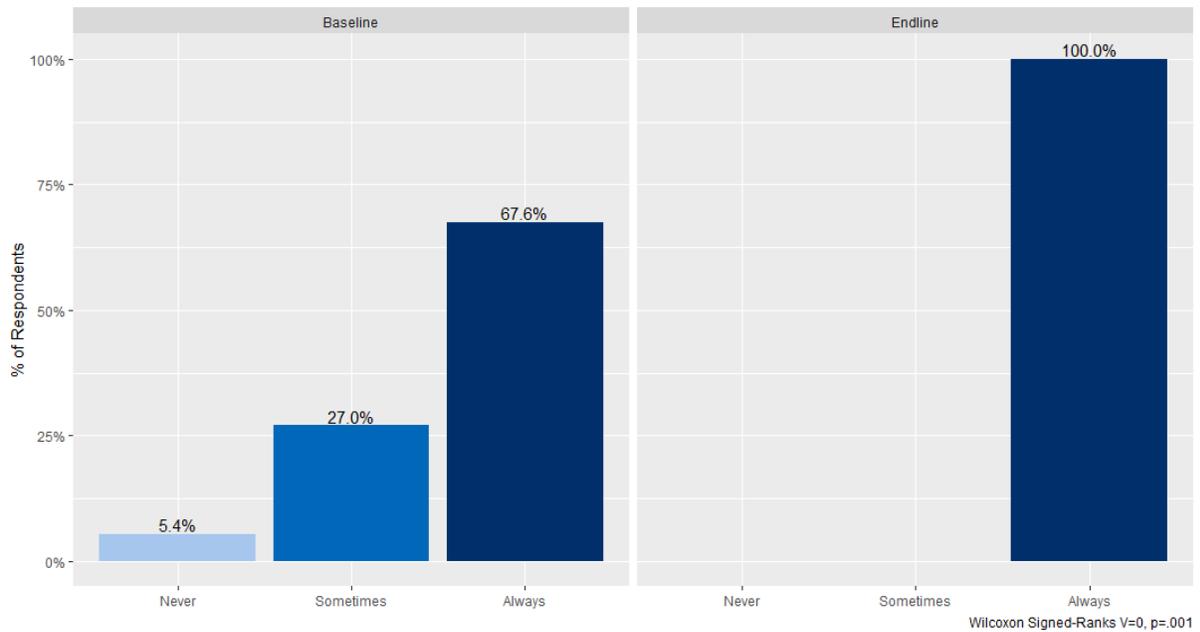
Women were asked “How often did you get more menstrual products when you needed to?”



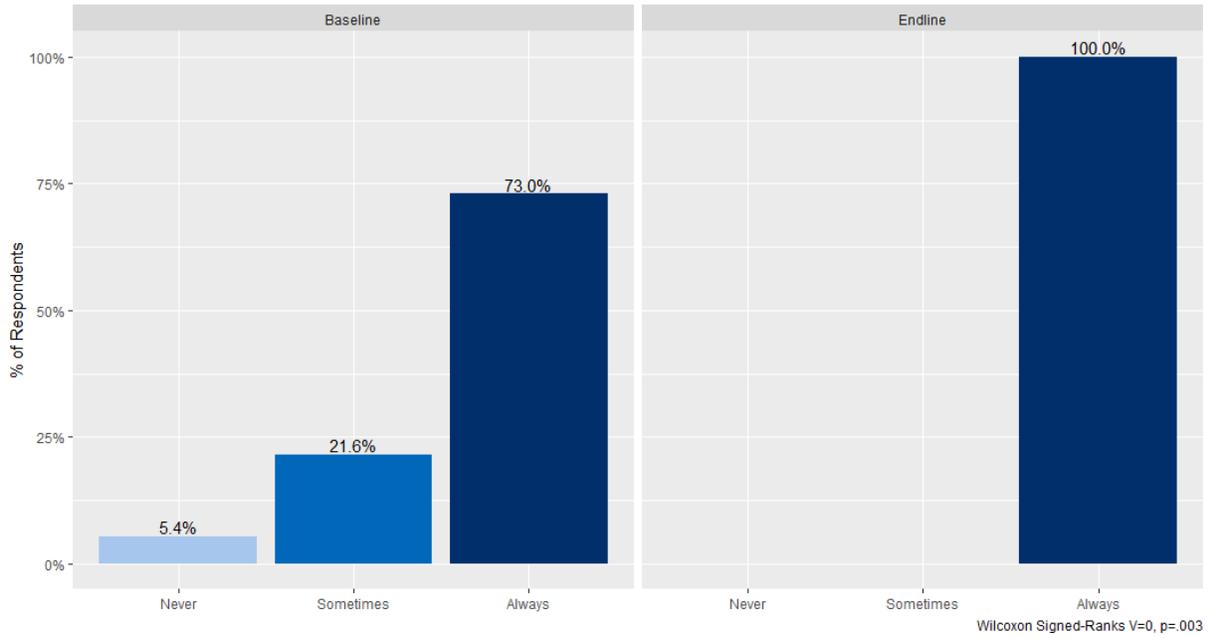
Women were asked “How often did you worry about how you would get more menstrual products at work if you ran out?”



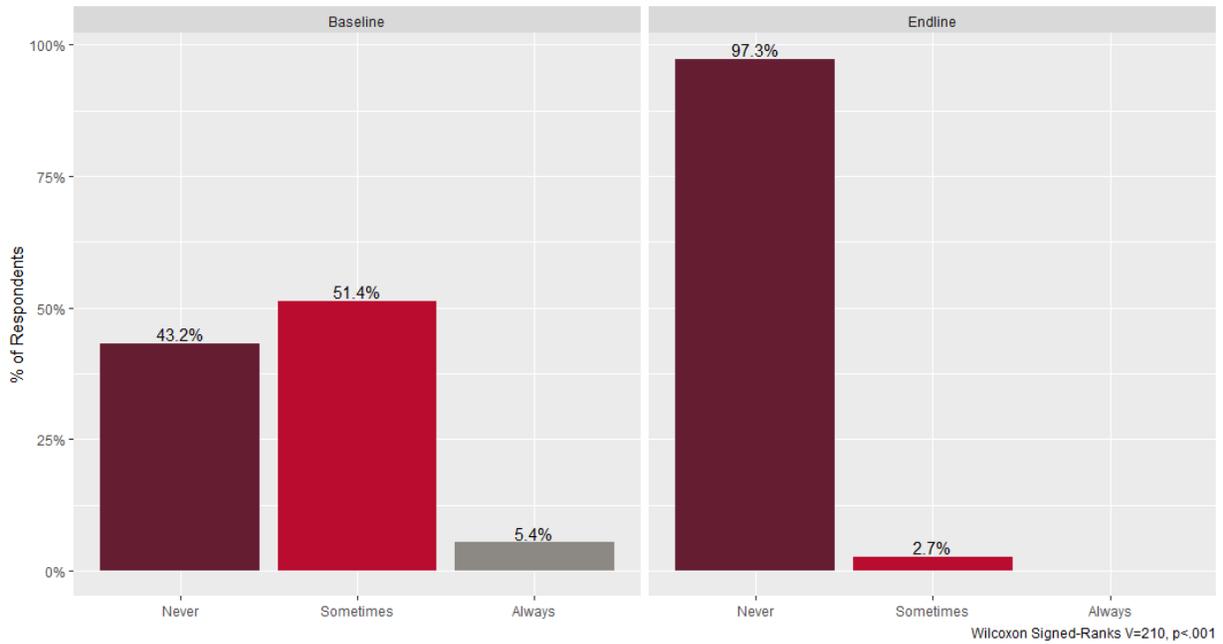
Women were asked “How often did you feel that your menstrual products were comfortable?”



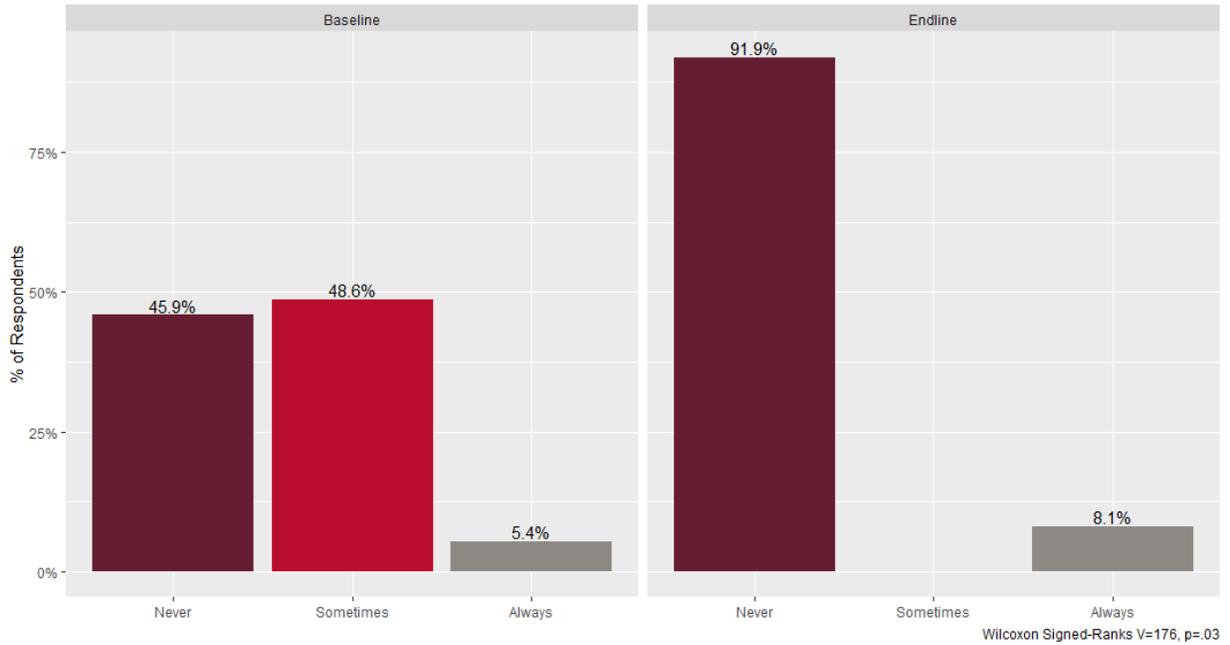
Women were asked “How often were you satisfied with the cleanliness of your menstrual products?”



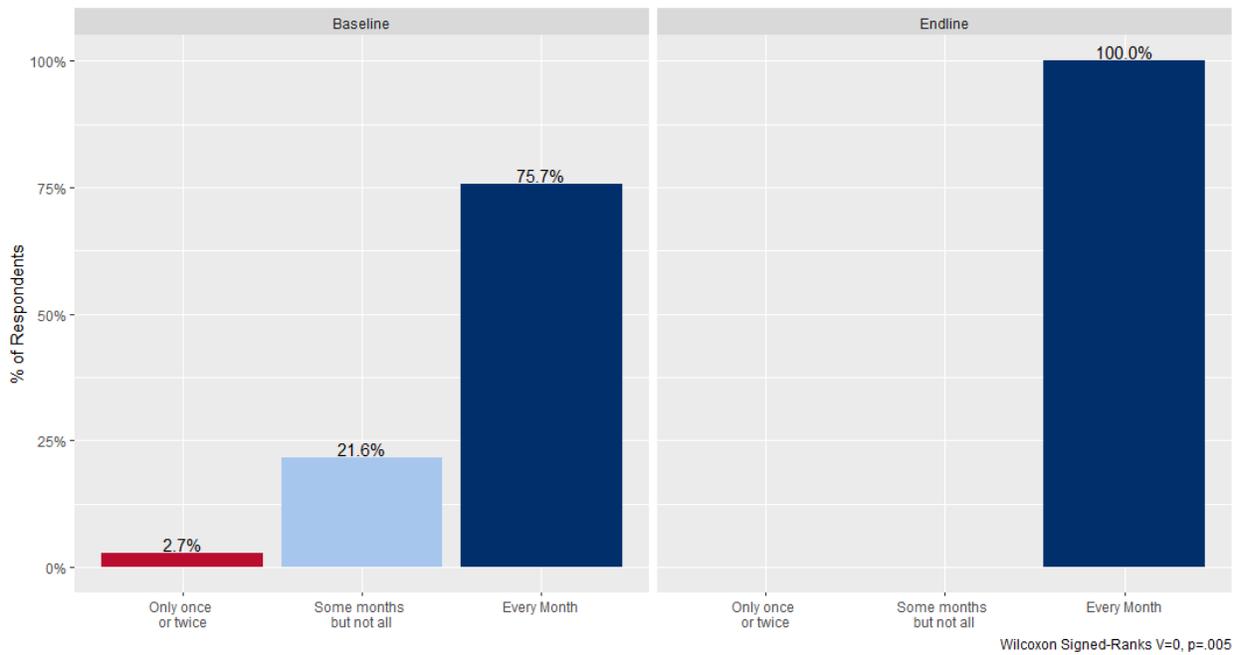
Women were asked “How often did you worry that your menstrual products would allow blood to pass through to your garments?”



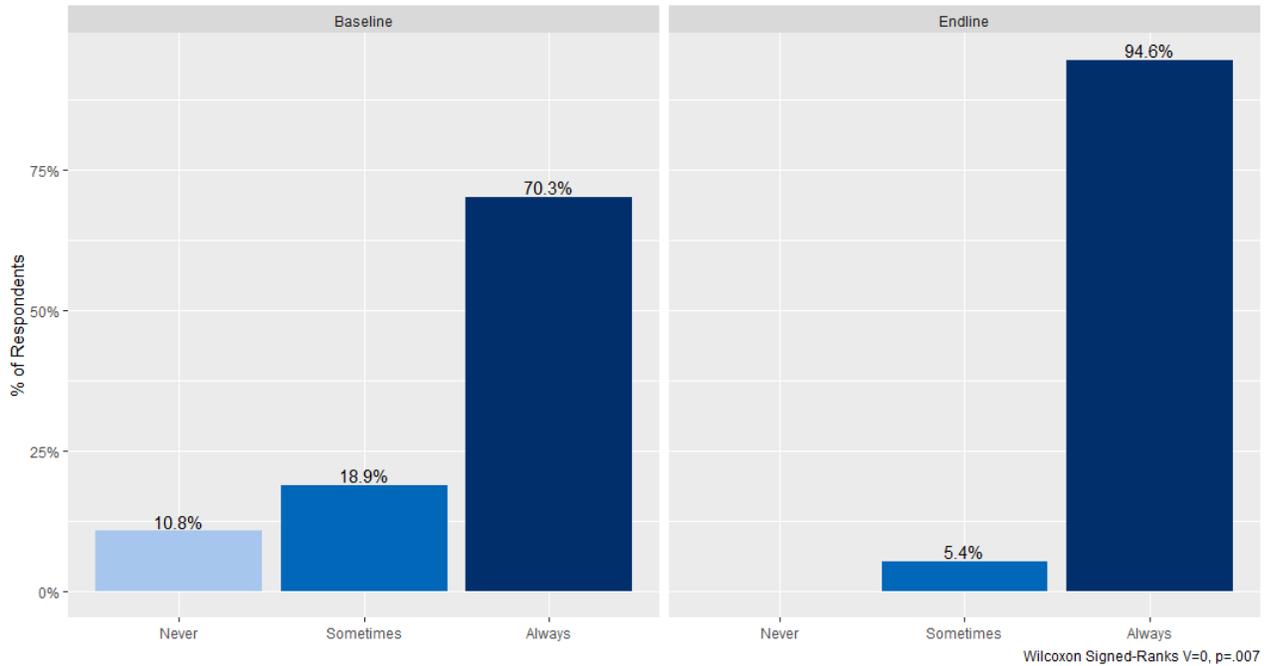
Women were asked “How often did you worry that your menstrual products would move from place while you were wearing them?”



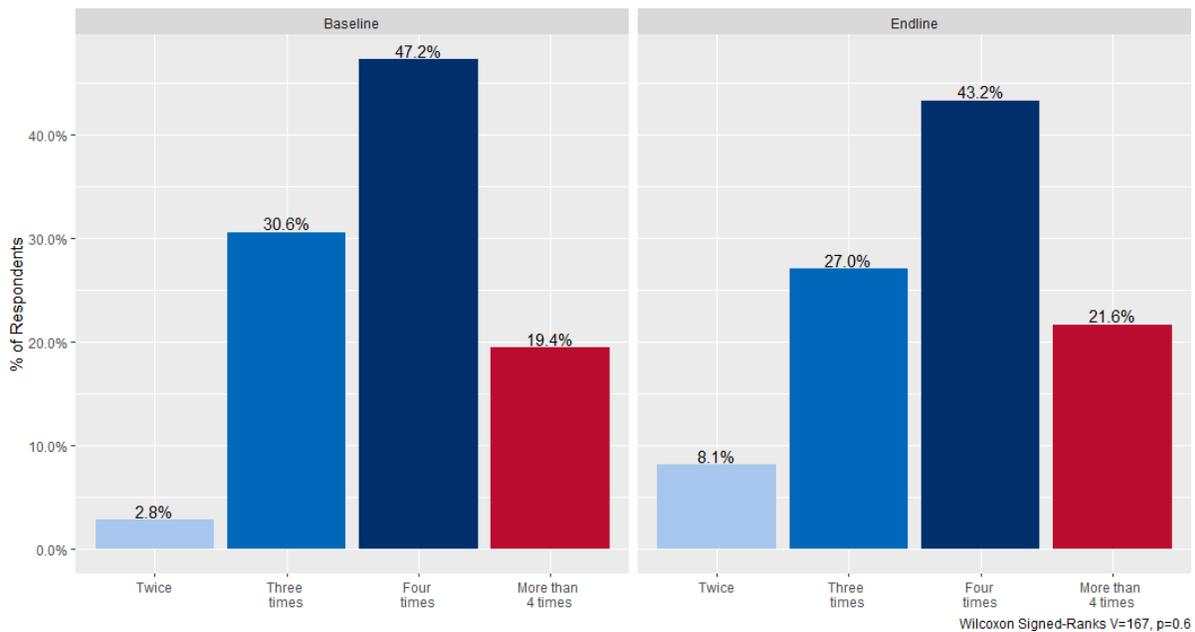
Affordability of menstrual products: We measured affordability of menstrual products with a 4-point Likert Scale question. Women were asked “During the last 9 months, how often did you have money to purchase menstrual materials?” Scores ranged from 3 (Every month) to 0 (Never).



Changing menstrual products: We measured possibility to change menstrual products with a 3-point Likert Scale question. Women were asked “How often did you have enough time and opportunities (such as breaks) to change your menstrual products when you wanted to?” Scores ranged from 2 (Always) to 0 (Never).

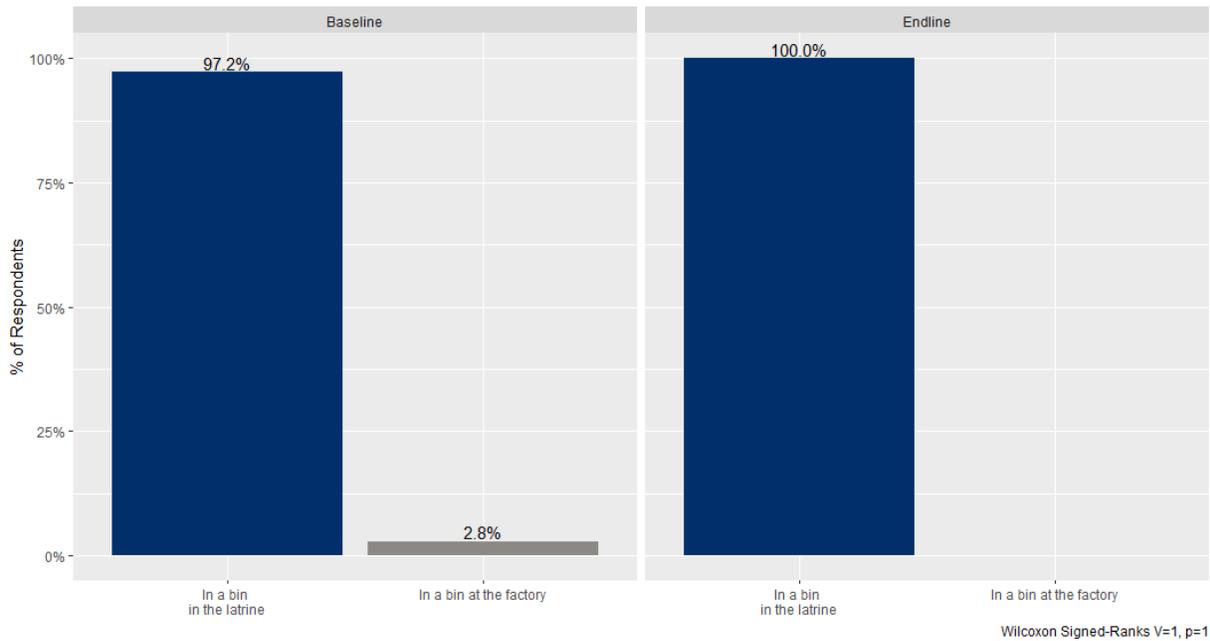


Women were asked “How many times did you change your menstrual products on the heaviest day of your period?”

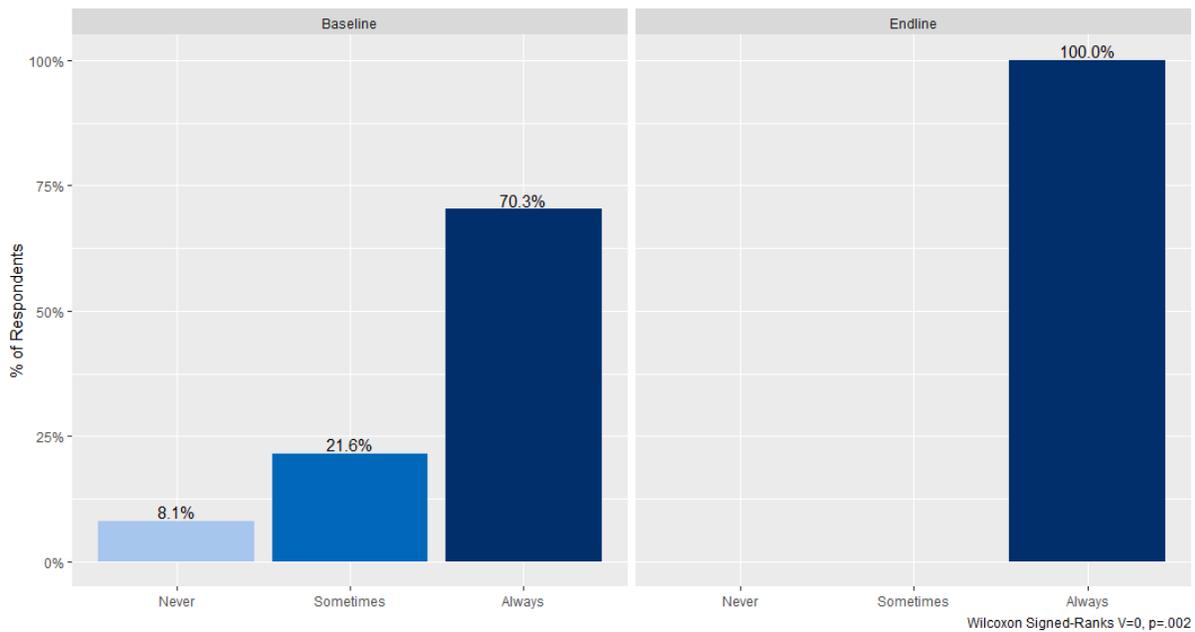


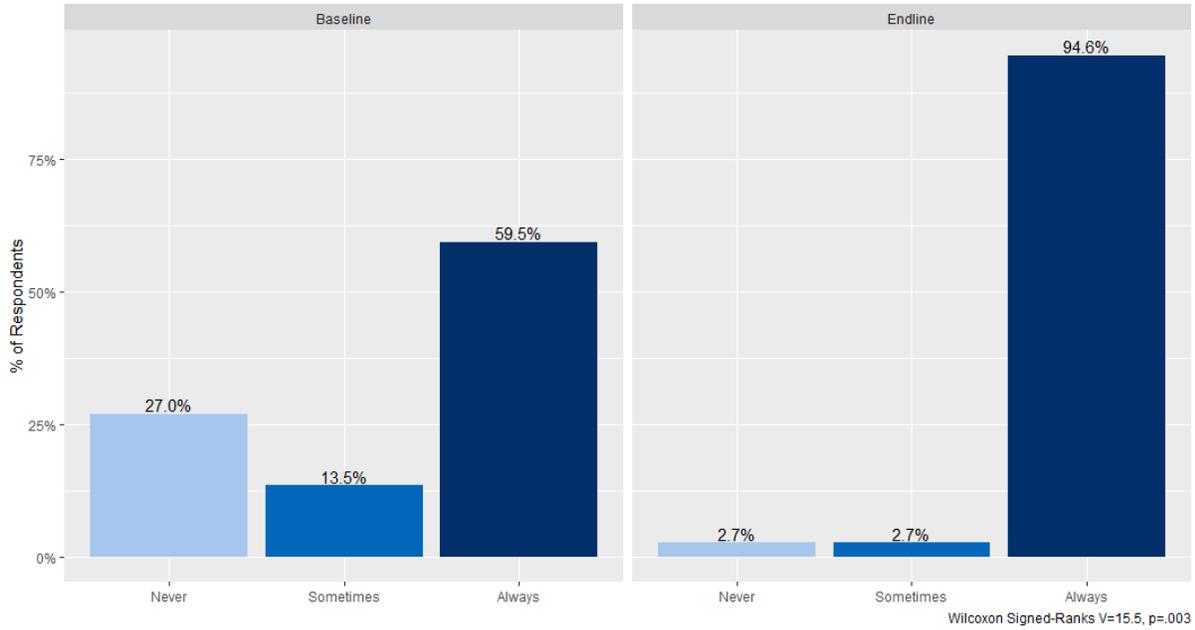
Disposal: Women were asked “Where did you most often dispose of your used menstrual materials? In the latrine or toilet; In a bin in the latrine; In a bin at the factory, but outside of the latrine or toilet; In

community rubbish (not at the factory); In a bush, waterway or buried; Burned; Transported used materials home to dispose of or reuse”

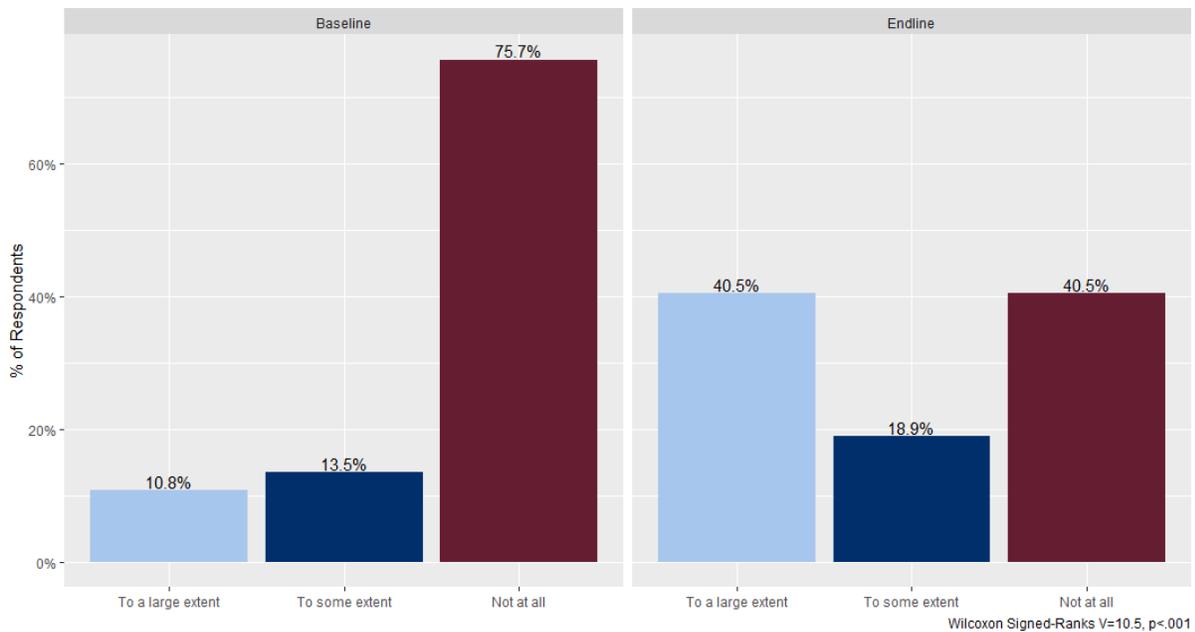


Storage: We measured storage through two 3-point Likert Scale questions. Women were asked “Did you feel comfortable carrying spare menstrual products with you to work?” and “Did you feel comfortable storing [keeping] your leftover or cleaned menstrual products at work until your next period?” Scores ranged from 2 (Always) to 0 (Never), with a total score range of 0-4.

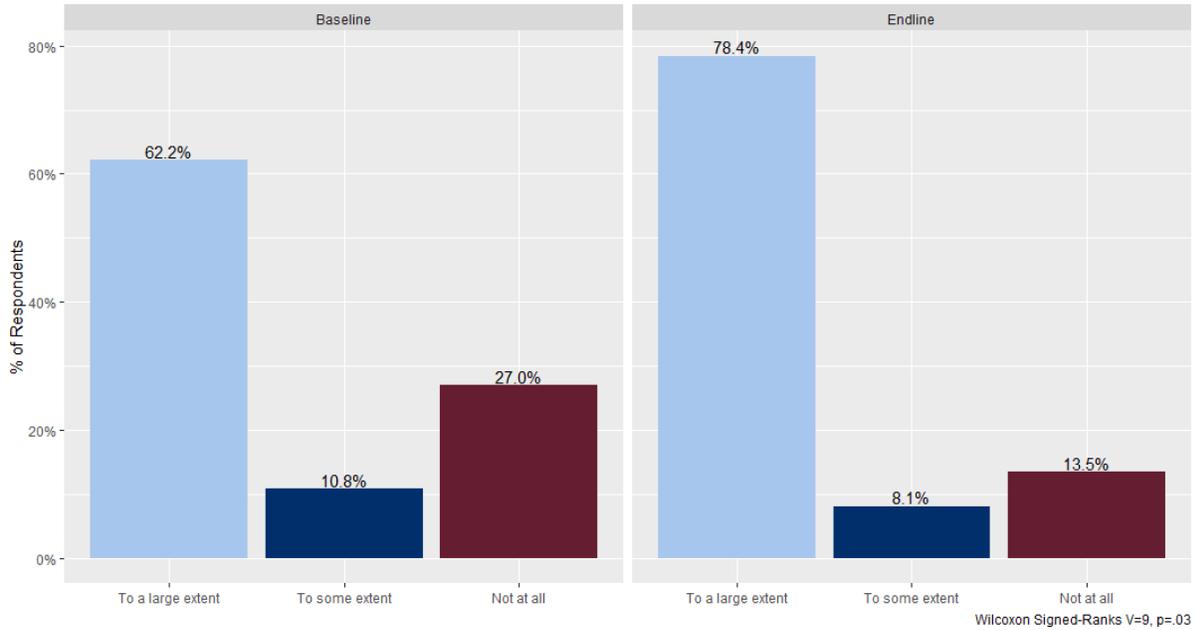




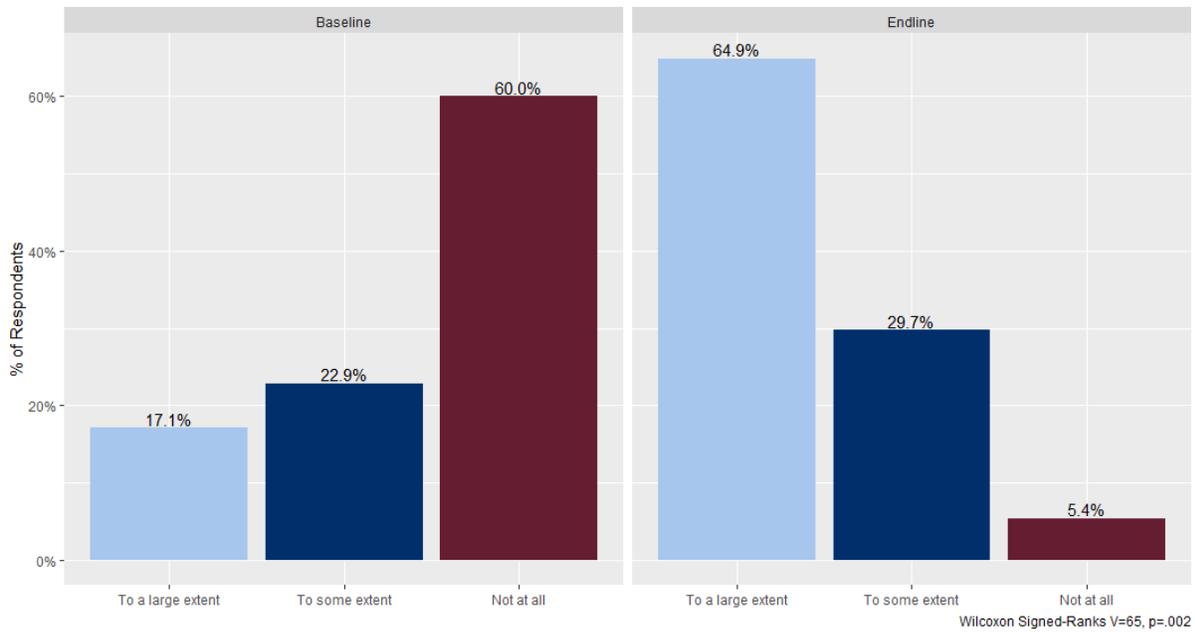
Support at work: We measured support at work with three 3-point Likert Scale questions. Scores ranged from 0 (Not at all) to 2 (To a large extent), with a total score range of 0-6. Women were asked “Do you feel comfortable telling your supervisors that you need to leave work for menstruation-related reasons?”



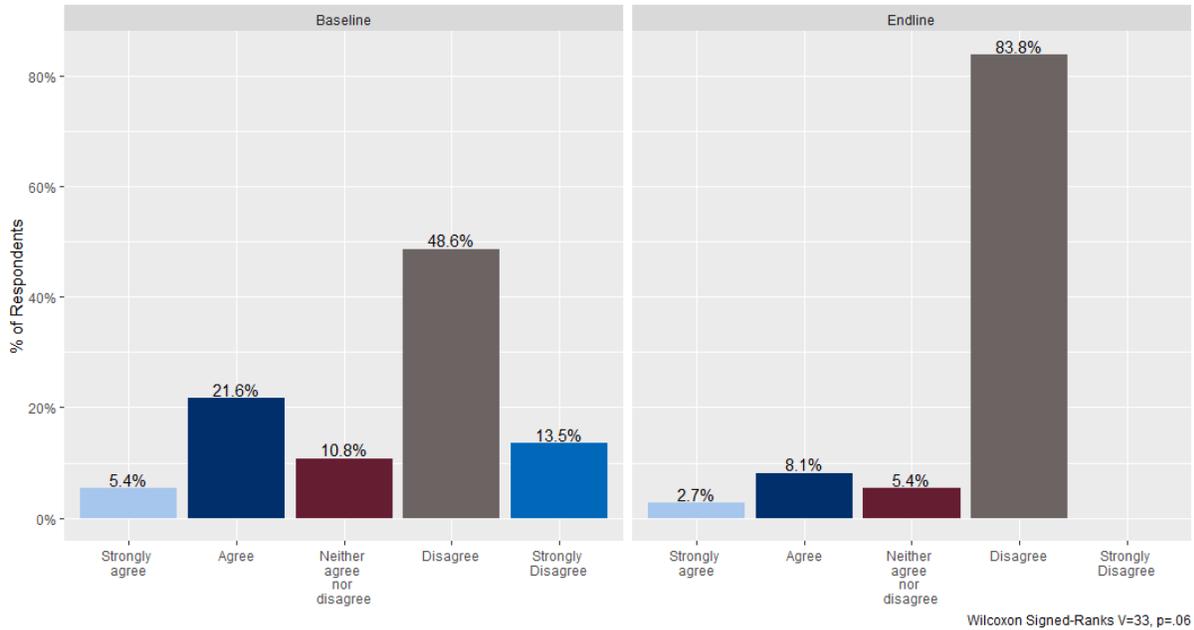
Women were asked “How comfortable do you feel going to the nurse when you are on your period for a menstruation-related issue?”



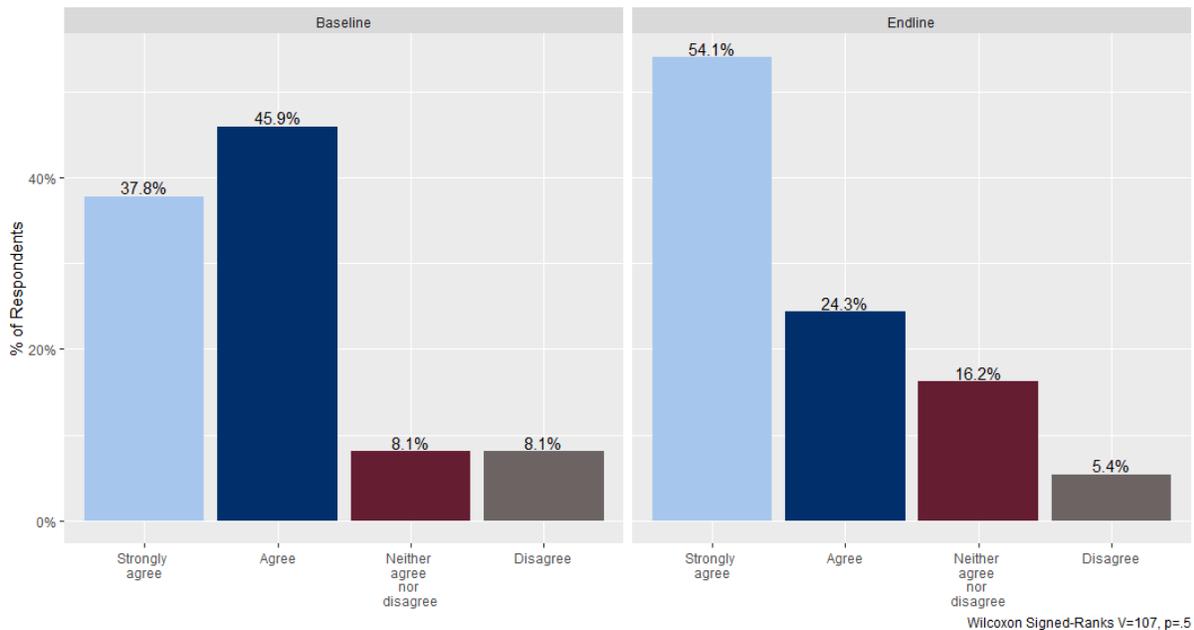
Women were asked “When you bring up an MHM-related issue or ask an MHM-related question to your supervisor or management, how respectfully do you feel they respond?”



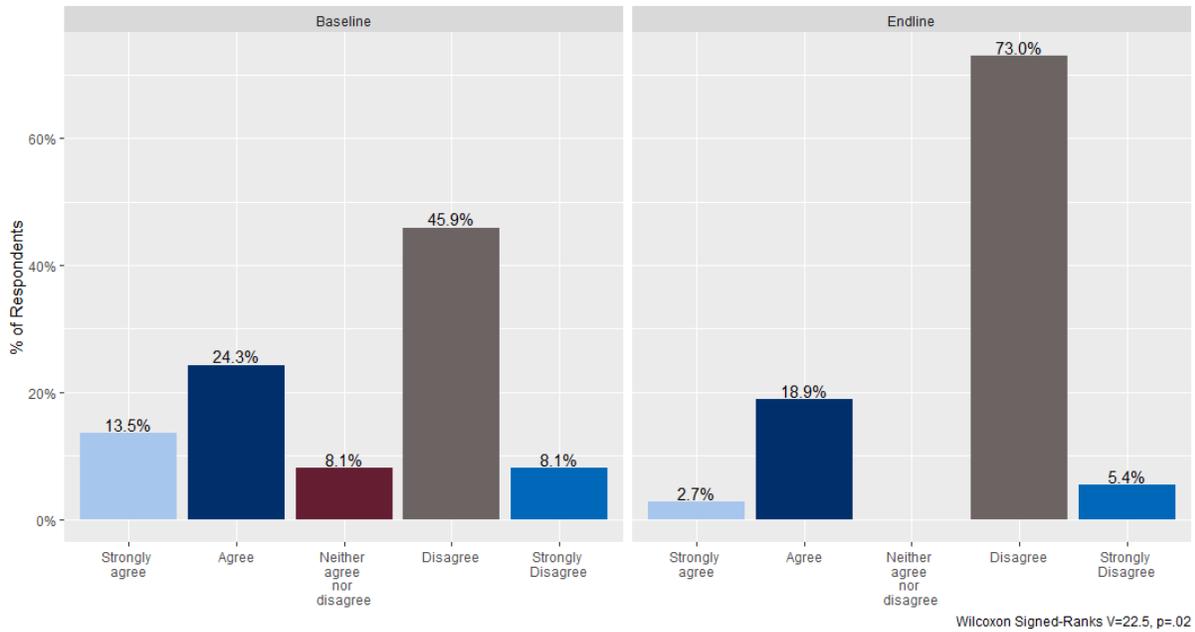
Presenteeism: We measured presenteeism through six 5-point Likert Scale questions. Total score ranged from 0-24. Women were asked whether they agreed with the following statement “Because of your menstrual period, the stresses of your job were much harder to handle.” The score ranged from 0 (Strongly disagree) to 4 (Strongly agree).



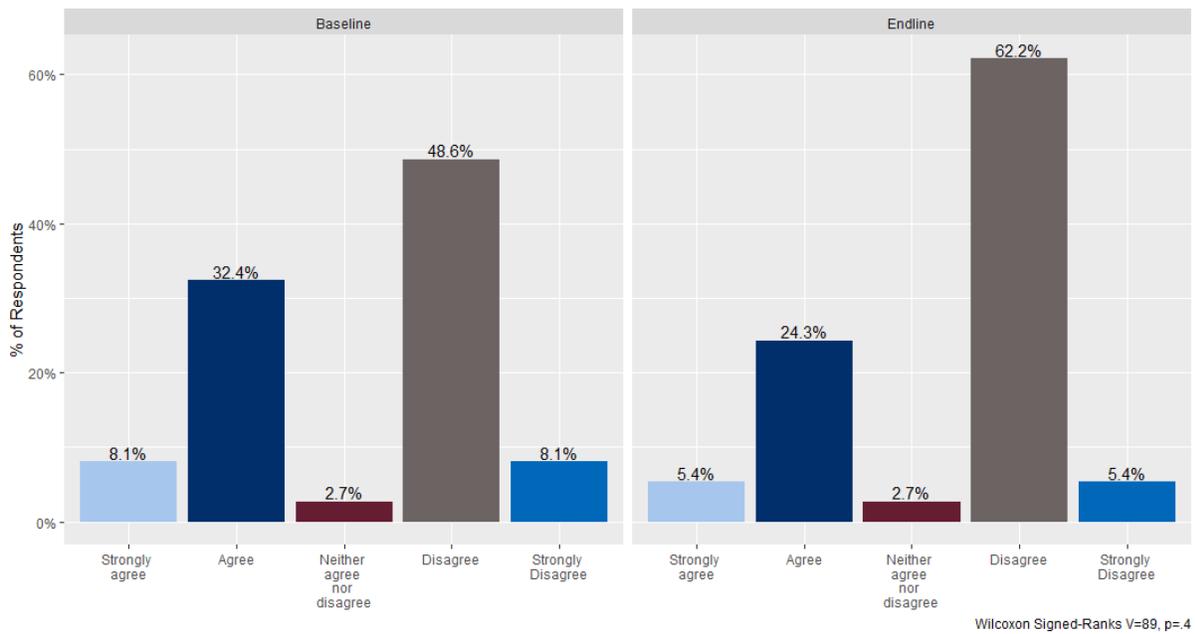
Women were asked whether they agreed with the following statement “Despite having your menstrual period, you were able to finish hard tasks in your work.” The score ranged from 0 (Strongly agree) to 4 (Strongly disagree).



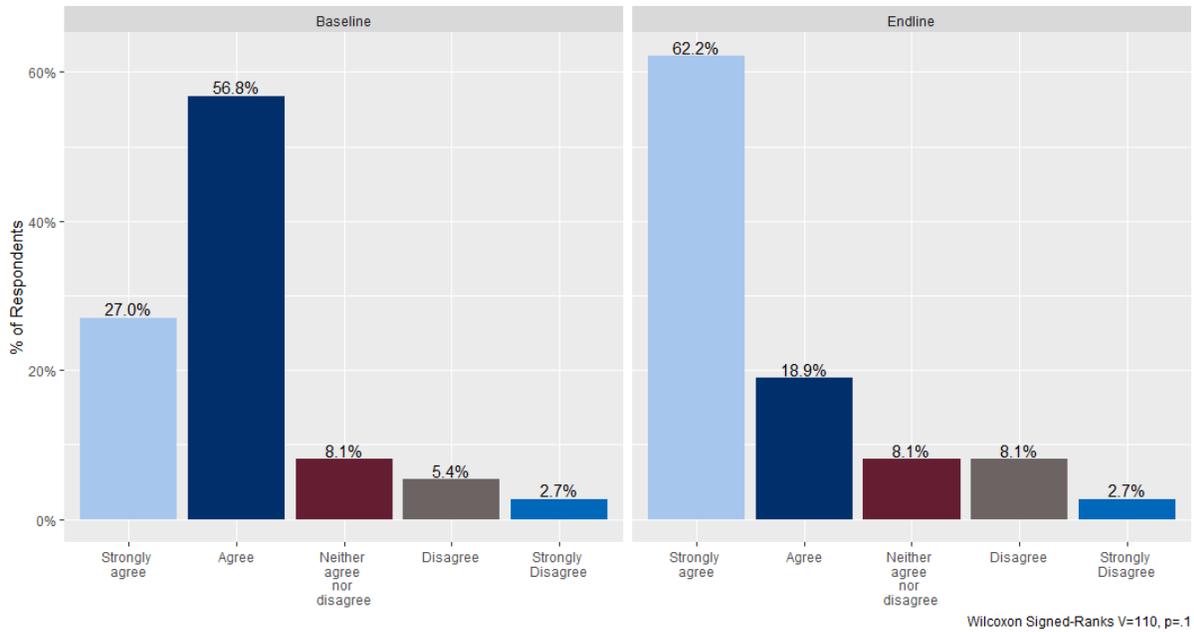
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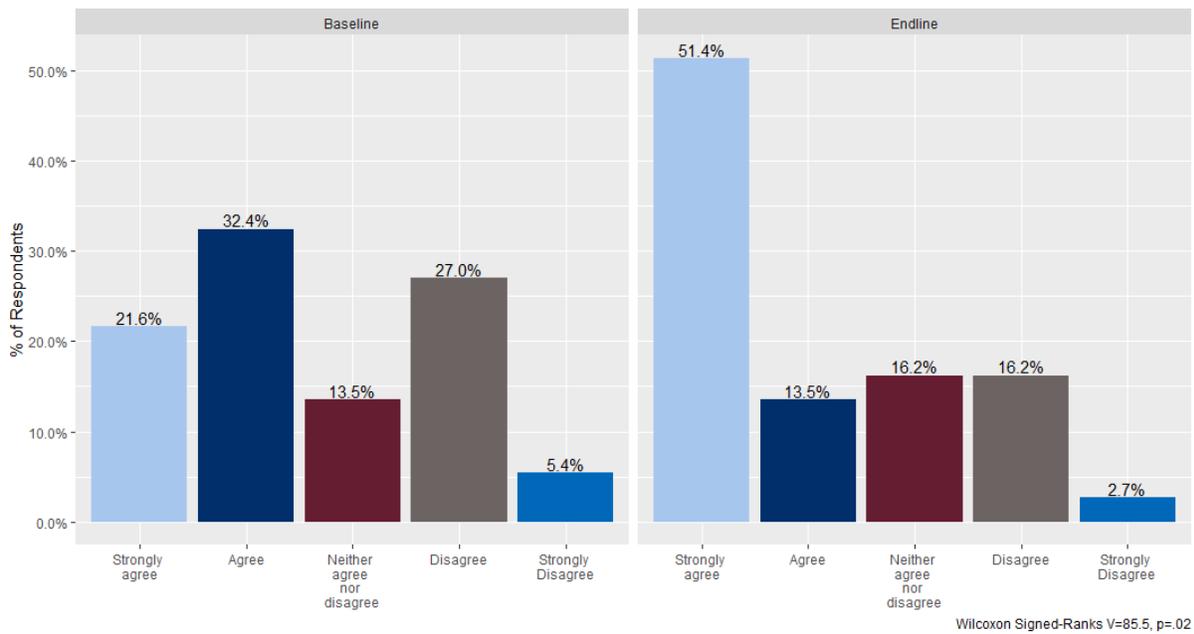
Women were asked whether they agreed with the following statement “You felt hopeless about finishing certain tasks at work, due to your menstrual period.” The score ranged from 0 (Strongly disagree) to 4 (Strongly agree).



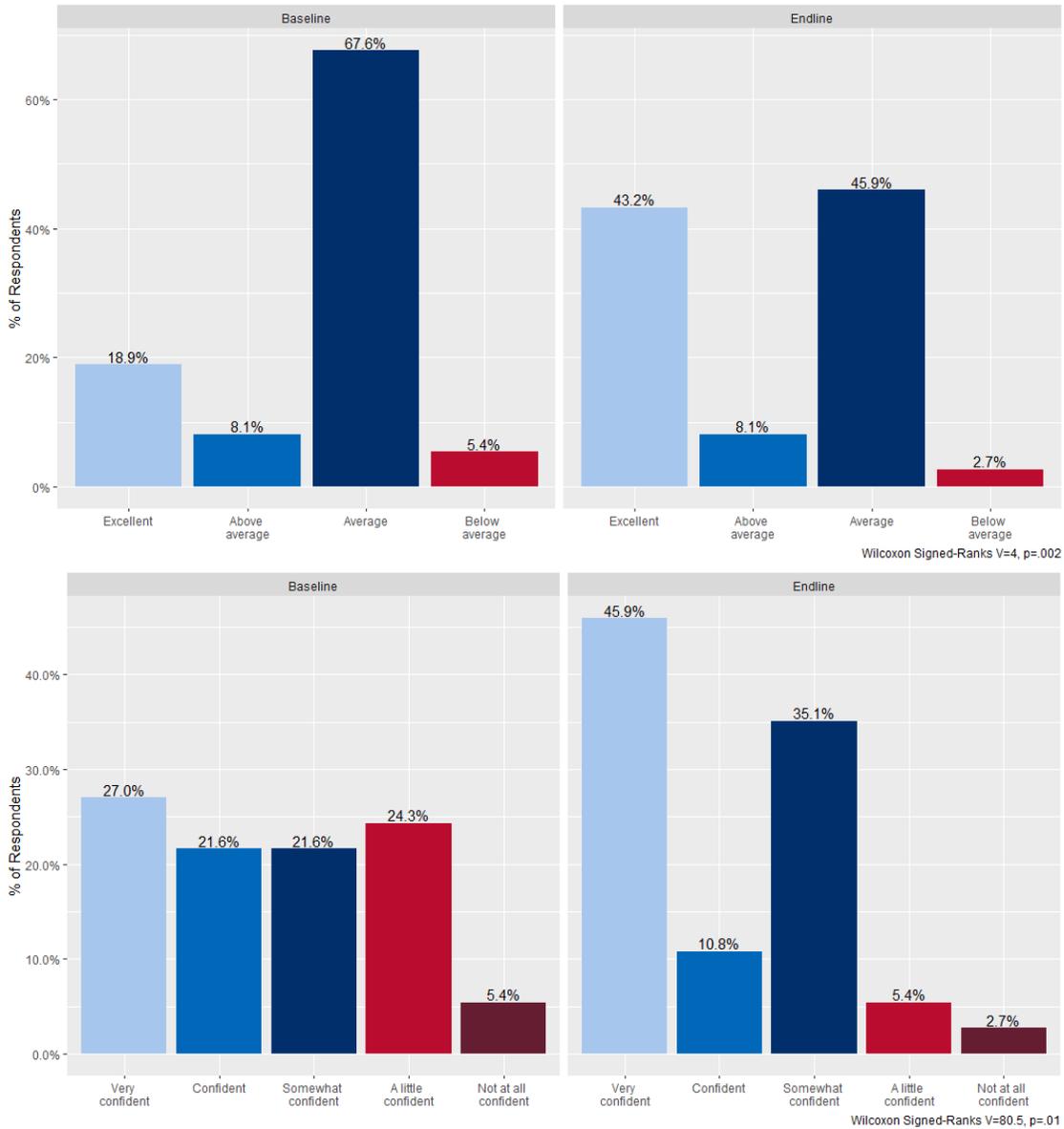
Women were asked whether they agreed with the following statement “At work, you were able to focus on achieving your goals despite your menstrual period.” The score ranged from 0 (Strongly agree) to 4 (Strongly disagree).



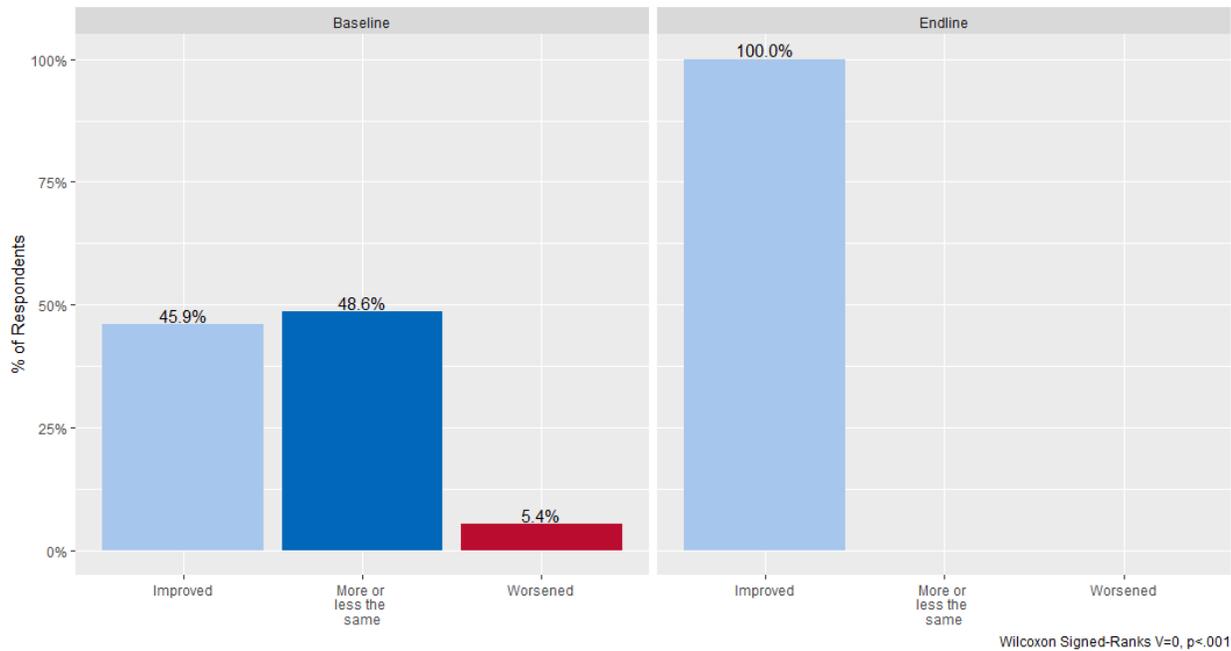
Women were asked whether they agreed with the following statement “Despite having your menstrual period, you felt energetic enough to complete all your work.” The score ranged from 0 (Strongly agree) to 4 (Strongly disagree).



Self-efficacy: We measured self-efficacy through two 5-point Likert Scale questions. Women were asked “How would you rate the quality of your work while on your period?” and “How confident do you feel that you can meet your personal production targets on time while on your period at work?” Scores ranged from 1 (Very poor; Not at all confident) to 5 (Excellent; Very confident), with a total score range of 2-10.

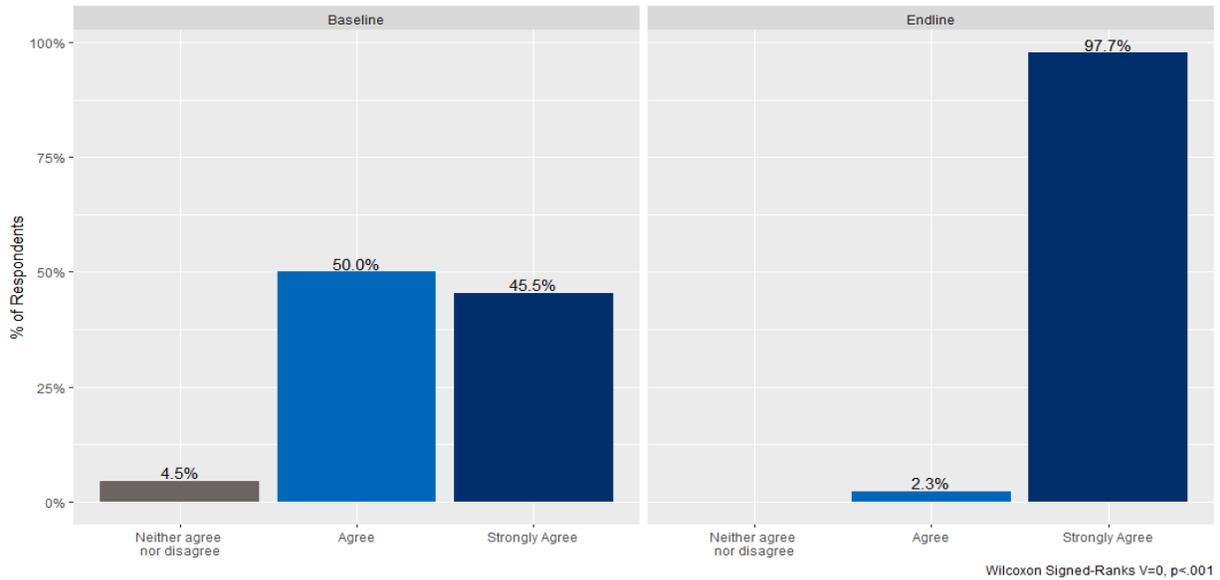


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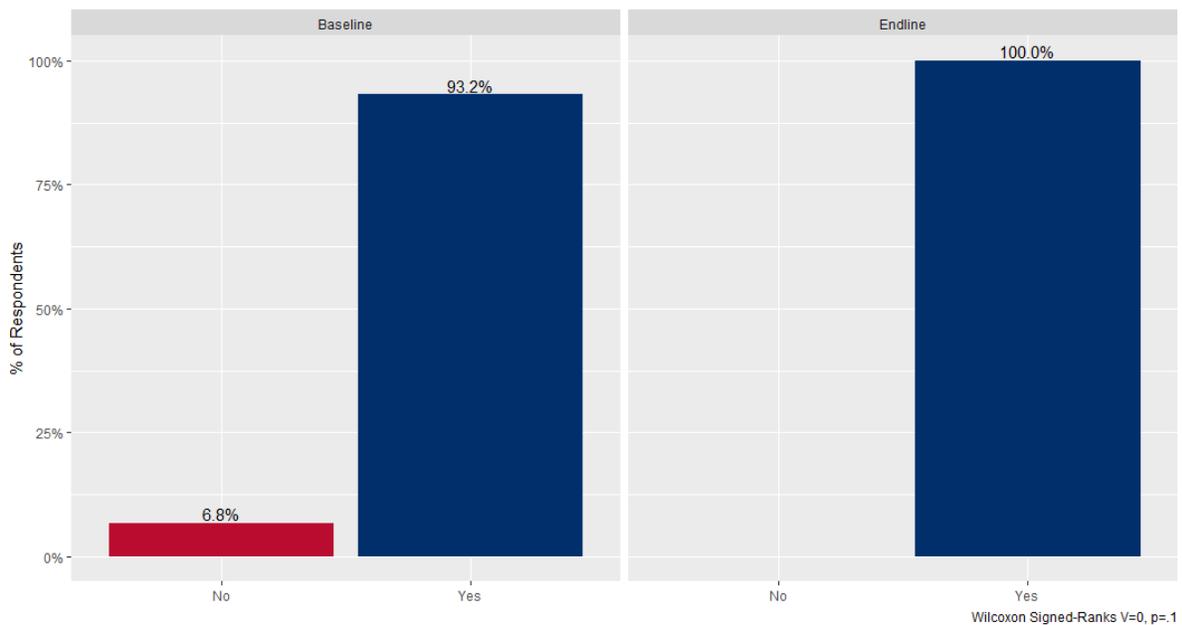


KENYA COMPANY B

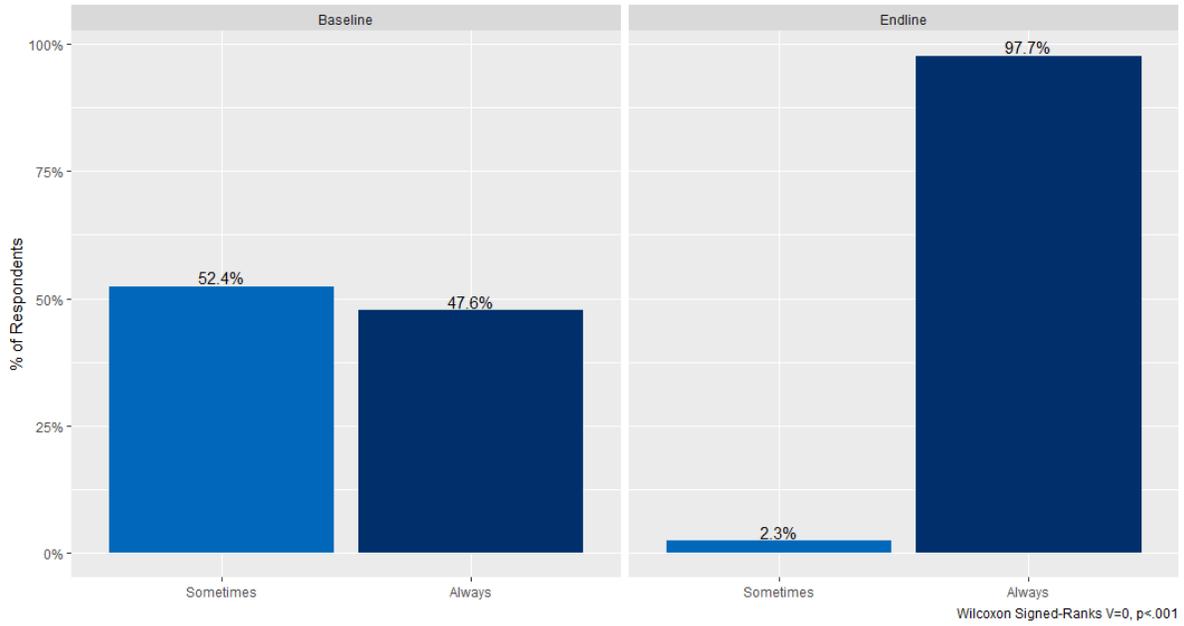
Confidence managing menstruation: We measured confidence managing menstruation with a 5-point Likert Scale question. Women were asked whether they agreed with the following statement: “I feel confident to manage my menstrual period at work, including changing, disposing, or washing material.” Scores ranged from 1 (Strongly disagree) to 5 (Strongly agree).



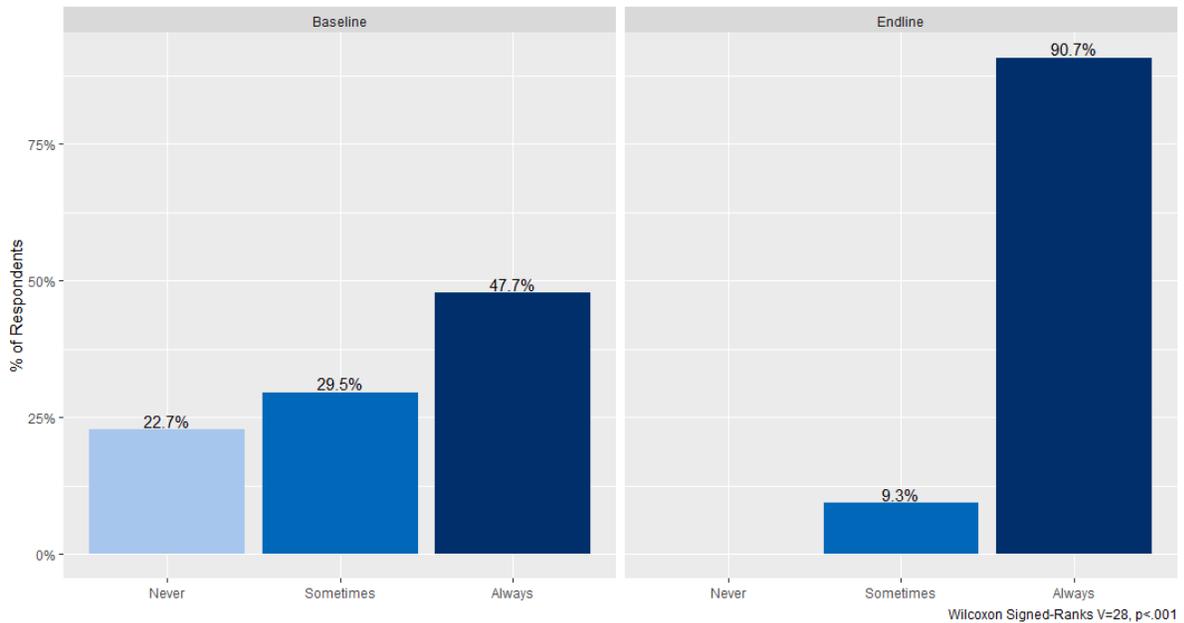
Adequate MHM: We measured access to materials with a dichotomous question. Women were asked “Did you have access to the materials you needed for managing your last menstrual period?” (Yes/No)



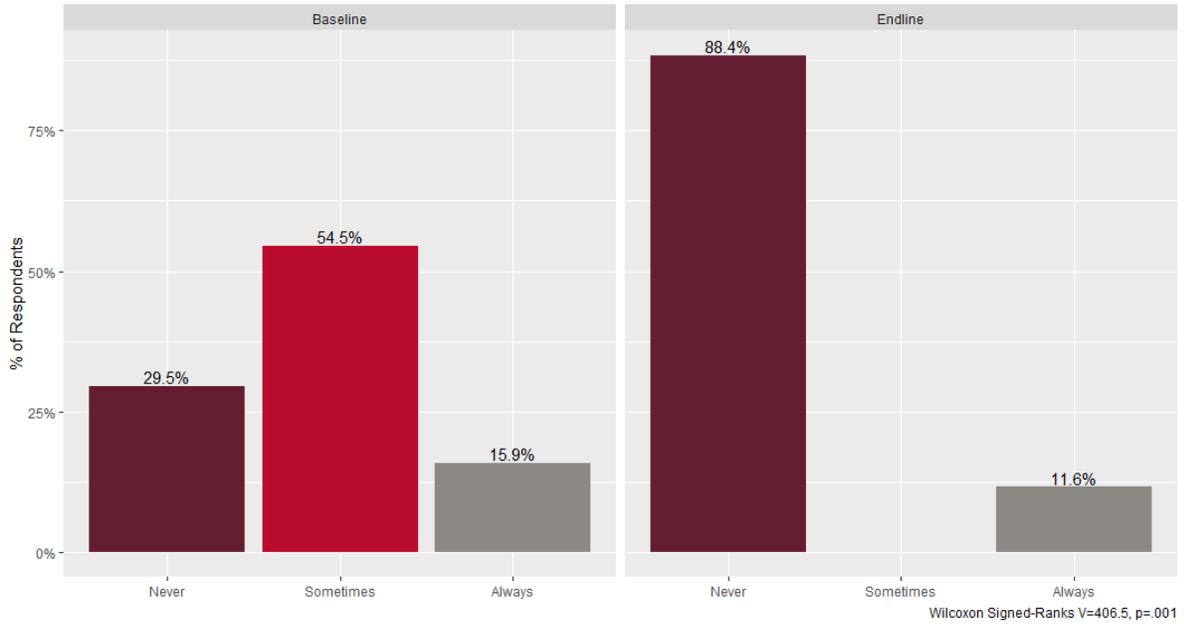
Products: We measured satisfaction with quality and supply of menstrual products using seven 3-point Likert Scale questions. Scores for each question ranged from 2 (Always) to 0 (Never), with a total score range of 0-14. Women were asked “How often did you have enough of your menstrual products to change them when you wanted to?”



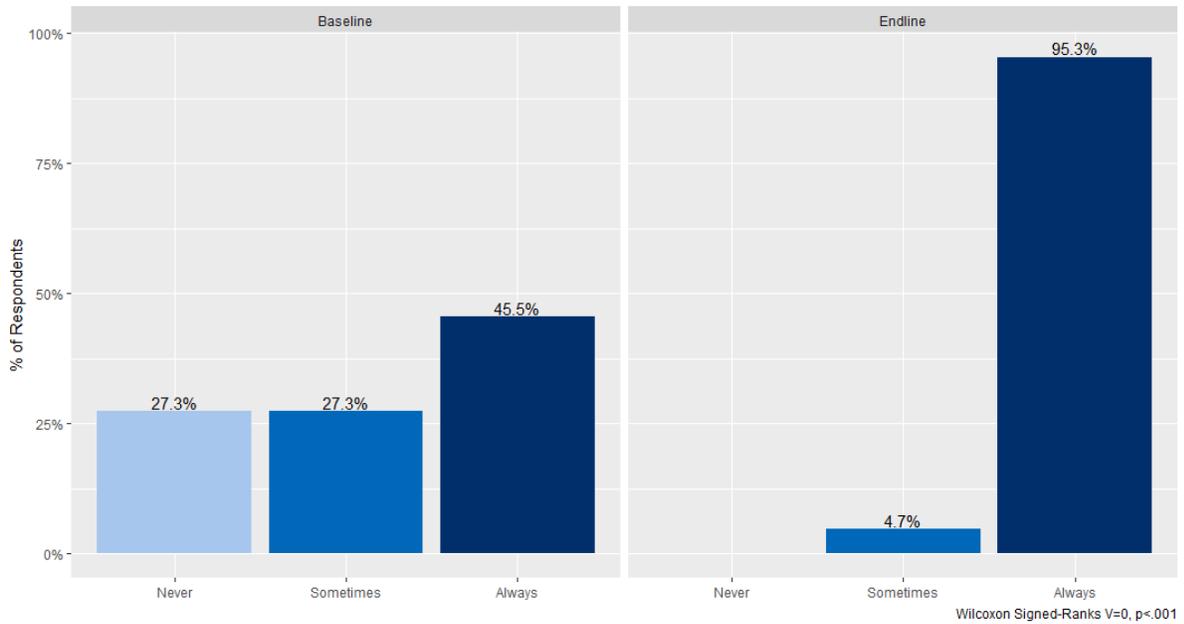
Women were asked “How often did you get more menstrual products when you needed to?”



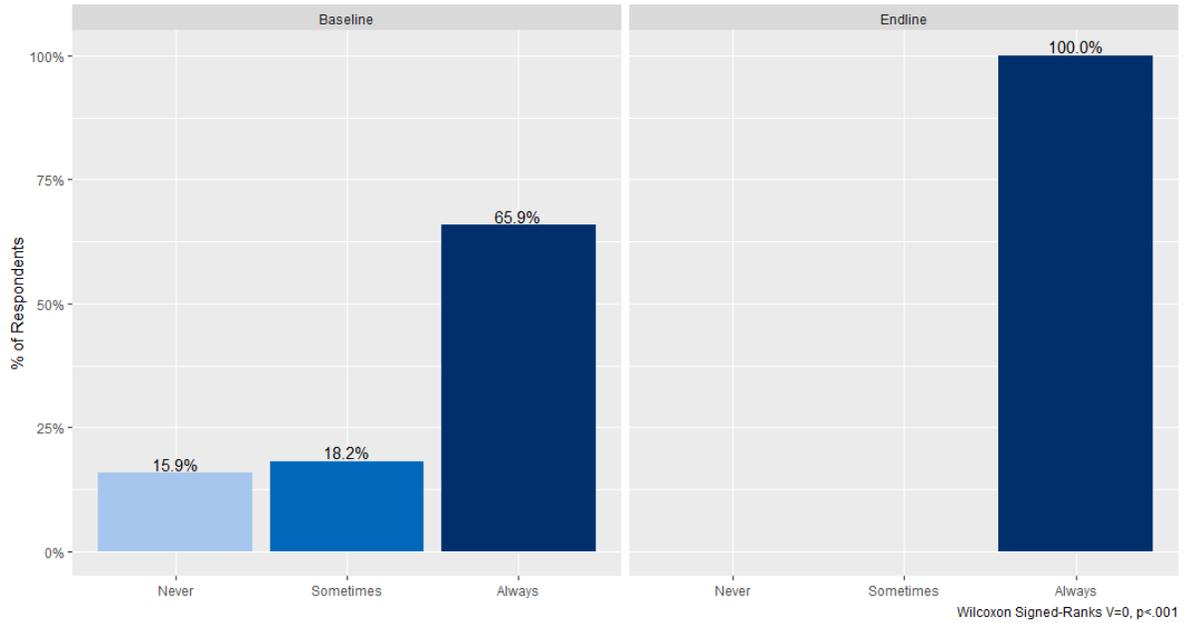
Women were asked “How often did you worry about how you would get more menstrual products at work if you ran out?”



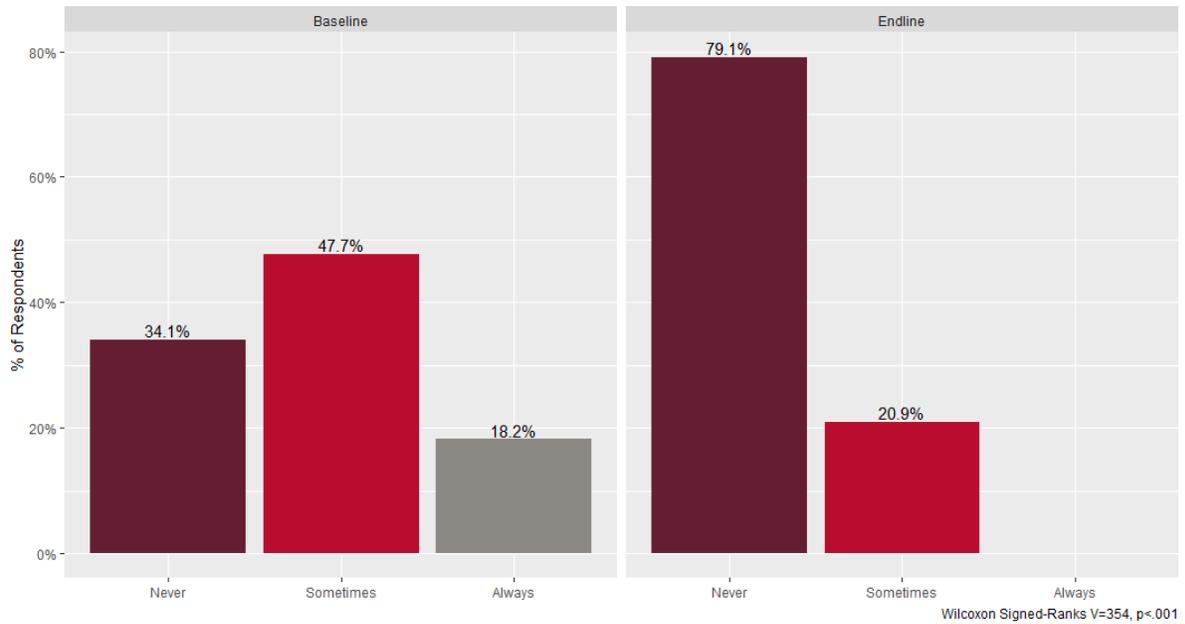
Women were asked “How often did you feel that your menstrual products were comfortable?”



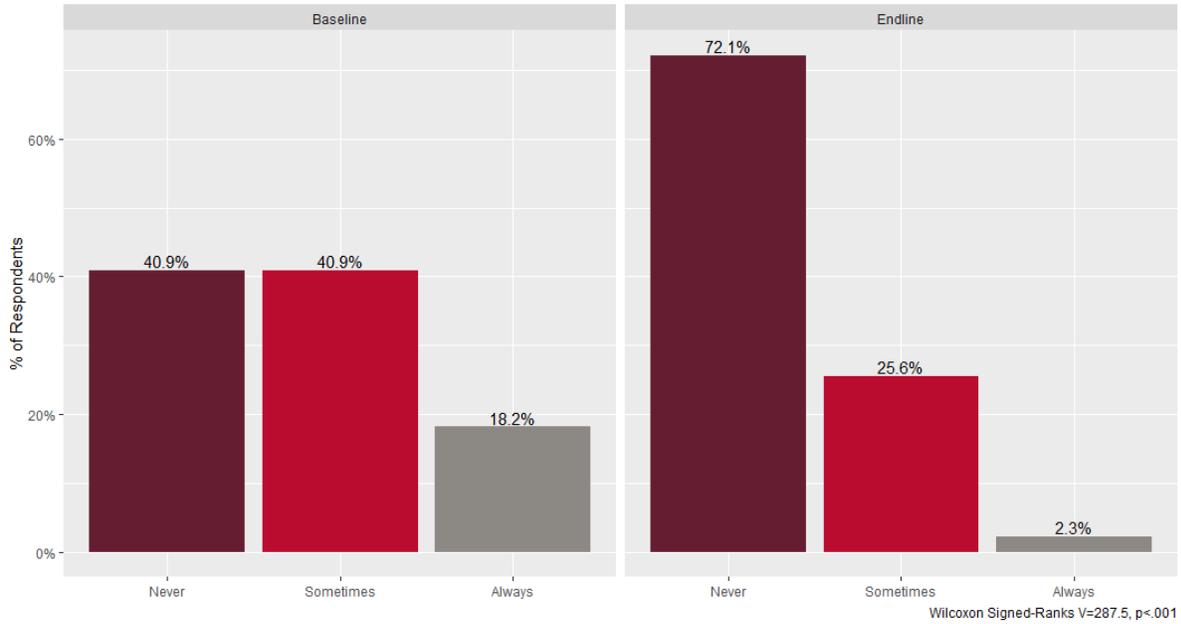
Women were asked “How often were you satisfied with the cleanliness of your menstrual products?”



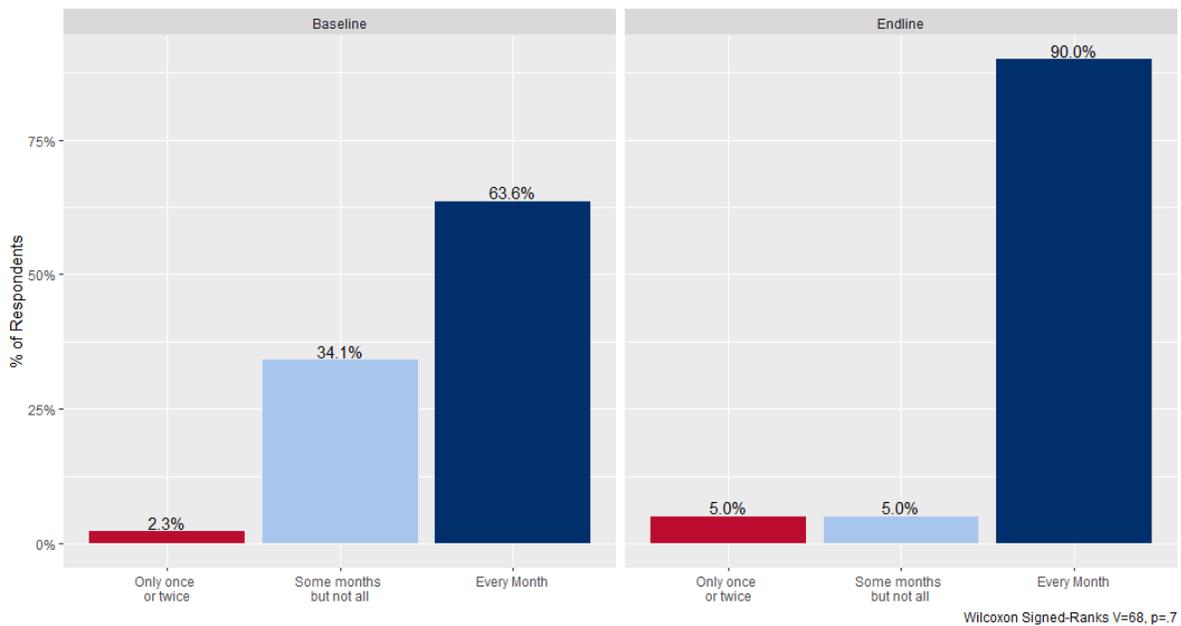
Women were asked “How often did you worry that your menstrual products would allow blood to pass through to your garments?”



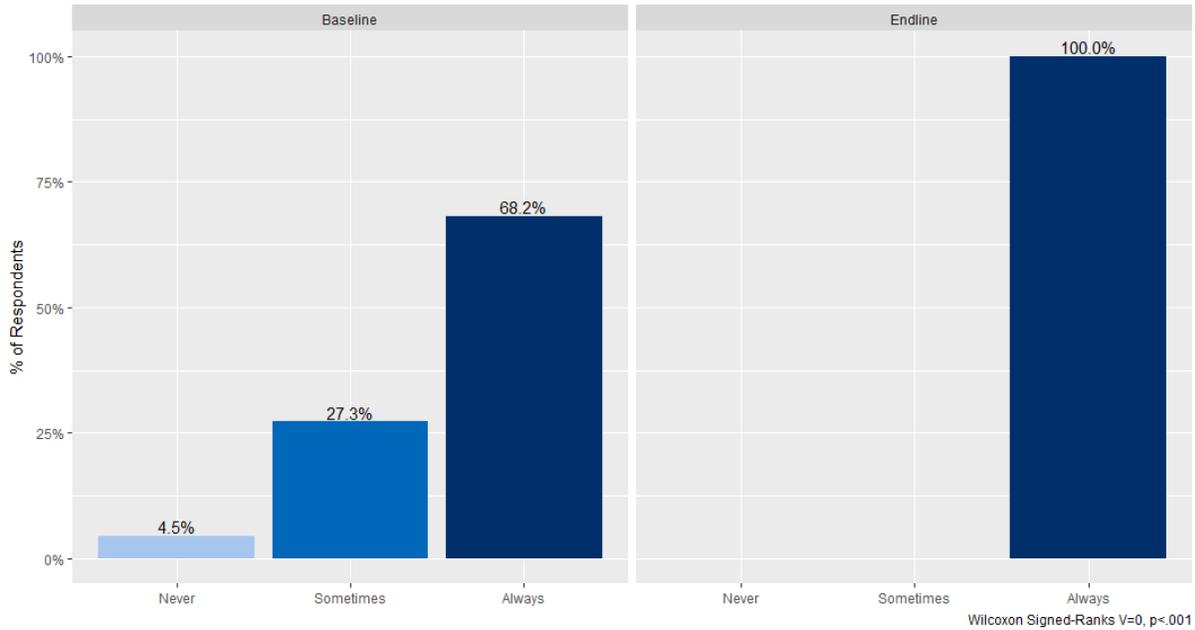
Women were asked “How often did you worry that your menstrual products would move from place while you were wearing them?”



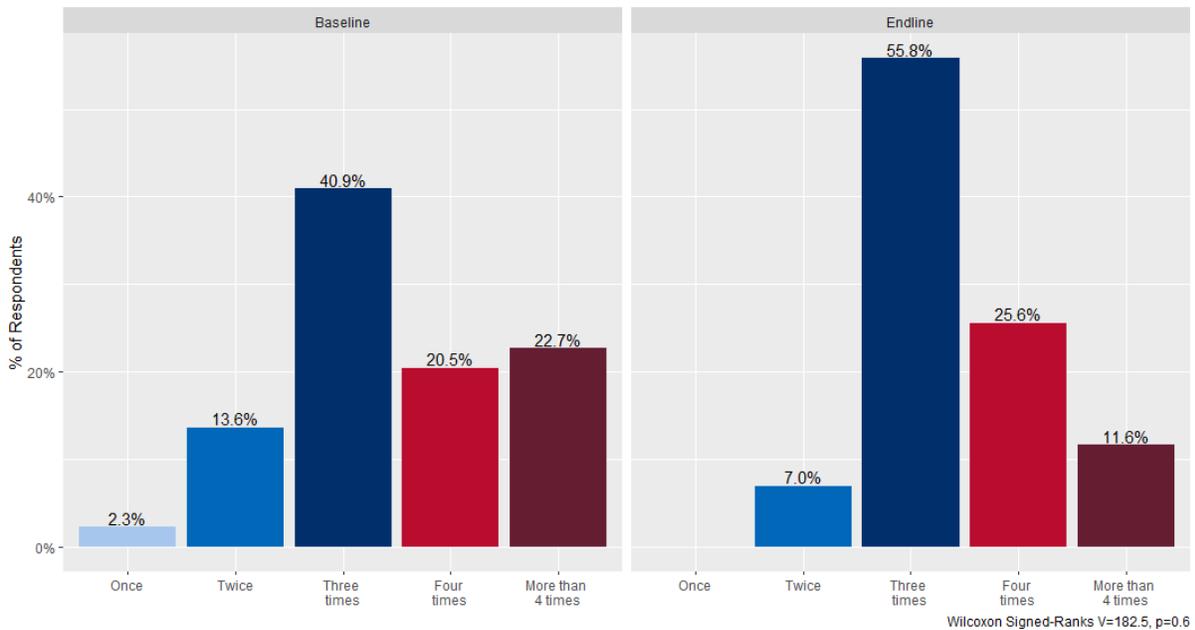
Affordability of menstrual products: We measured affordability of menstrual products with a 4-point Likert Scale question. Women were asked “During the last 5 months, how often did you have money to purchase menstrual materials?” Scores ranged from 3 (Every month) to 0 (Never).



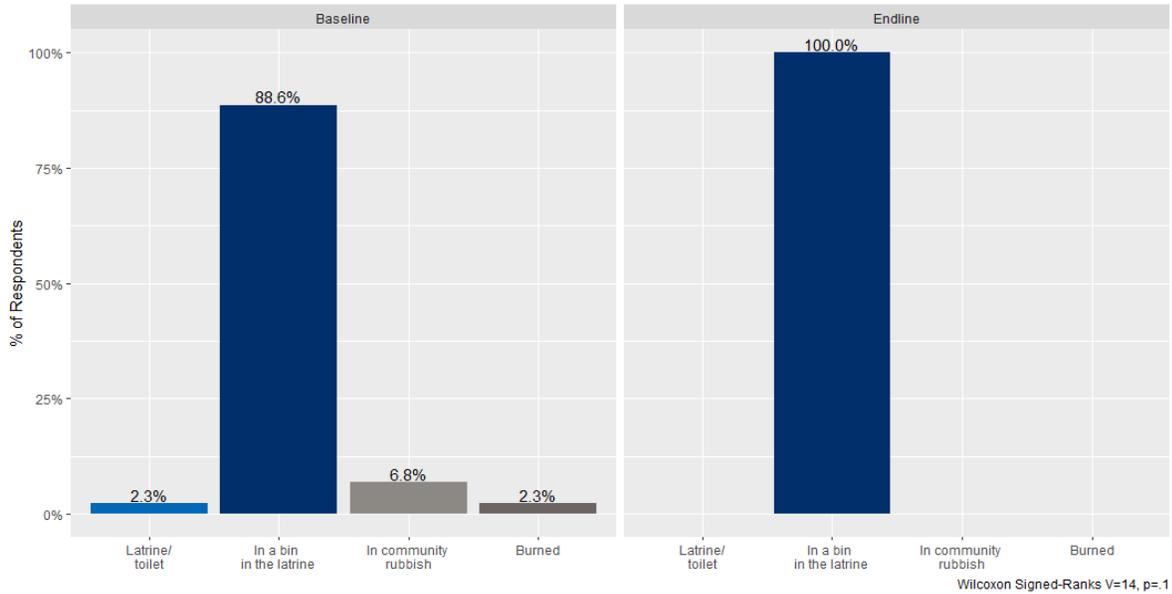
Changing menstrual products: We measured possibility to change menstrual products with a 3-point Likert Scale question. Women were asked “How often did you have enough time and opportunities (such as breaks) to change your menstrual materials when you wanted to?” Scores ranged from 2 (Always) to 0 (Never).



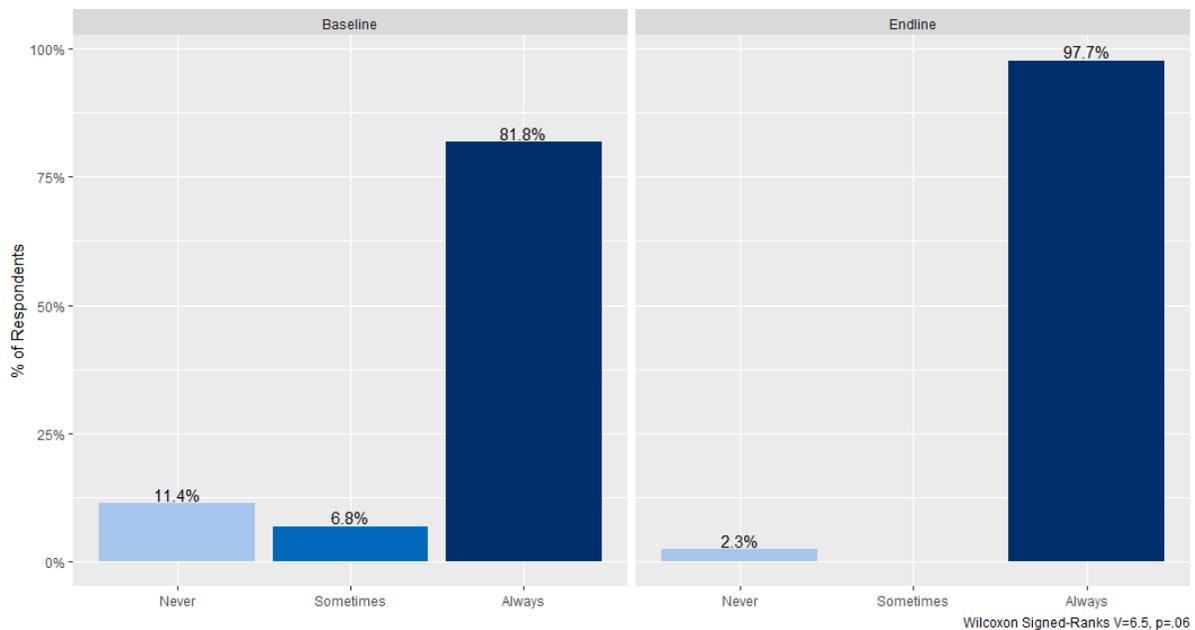
Women were asked “How many times did you change your menstrual products on the heaviest day of your period?”

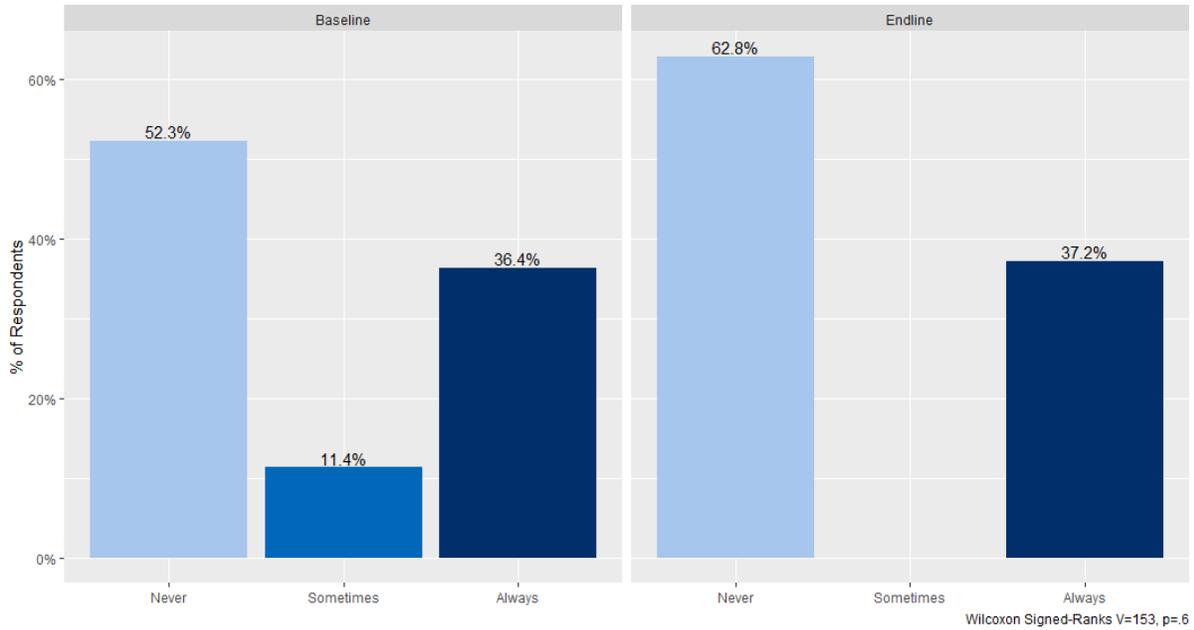


Disposal: Women were asked “Where did you most often dispose of your used menstrual materials? In the latrine or toilet; In a bin in the latrine; In a bin at the factory, but outside of the latrine or toilet; In community rubbish (not at the factory); In a bush, waterway or buried; Burned; Transported used materials home to dispose of or reuse”

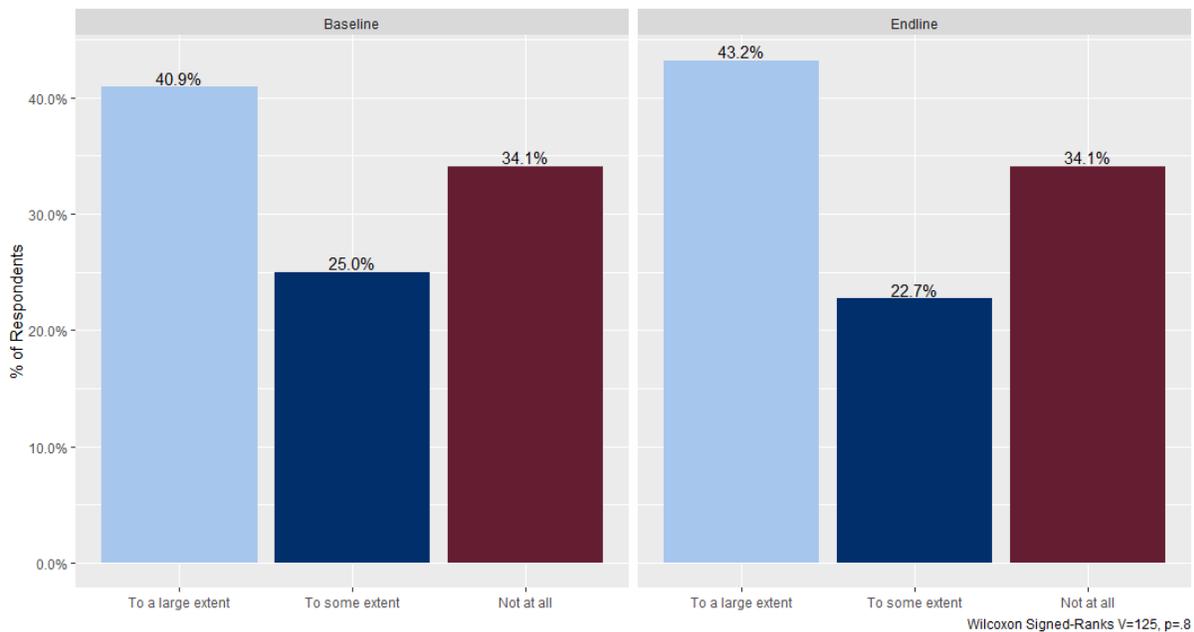


Storage: We measured storage through two 3-point Likert Scale questions. Women were asked “Did you feel comfortable carrying spare menstrual products with you to work?” and “Did you feel comfortable storing [keeping] your leftover or cleaned menstrual products at work until your next period?” Scores ranged from 2 (Always) to 0 (Never), with a total score range of 0-4.

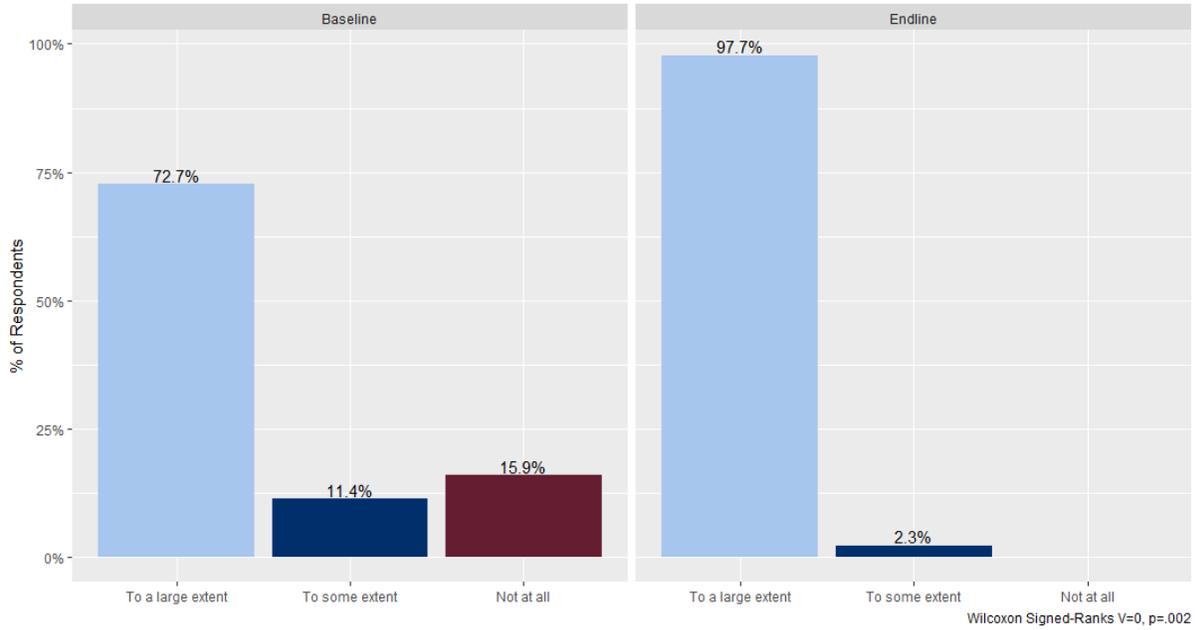




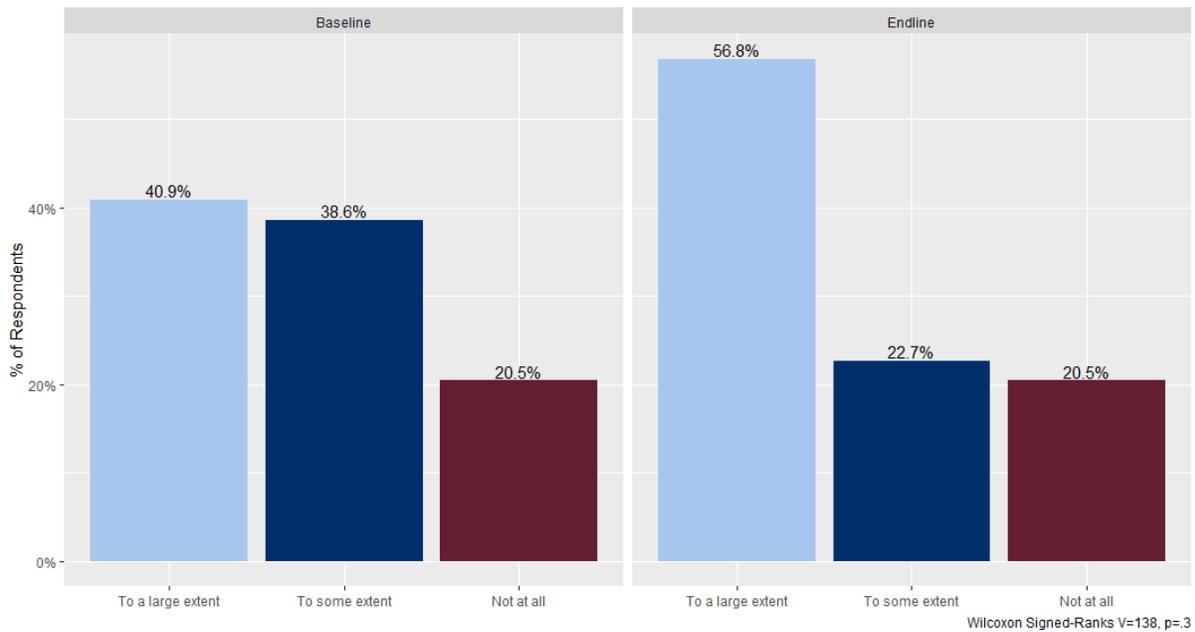
Support at work: We measured support at work with three 3-point Likert Scale questions. Scores ranged from 0 (Not at all) to 2 (To a large extent), with a total score range of 0-6. Women were asked “Do you feel comfortable telling your supervisors that you need to leave work for menstruation-related reasons?”



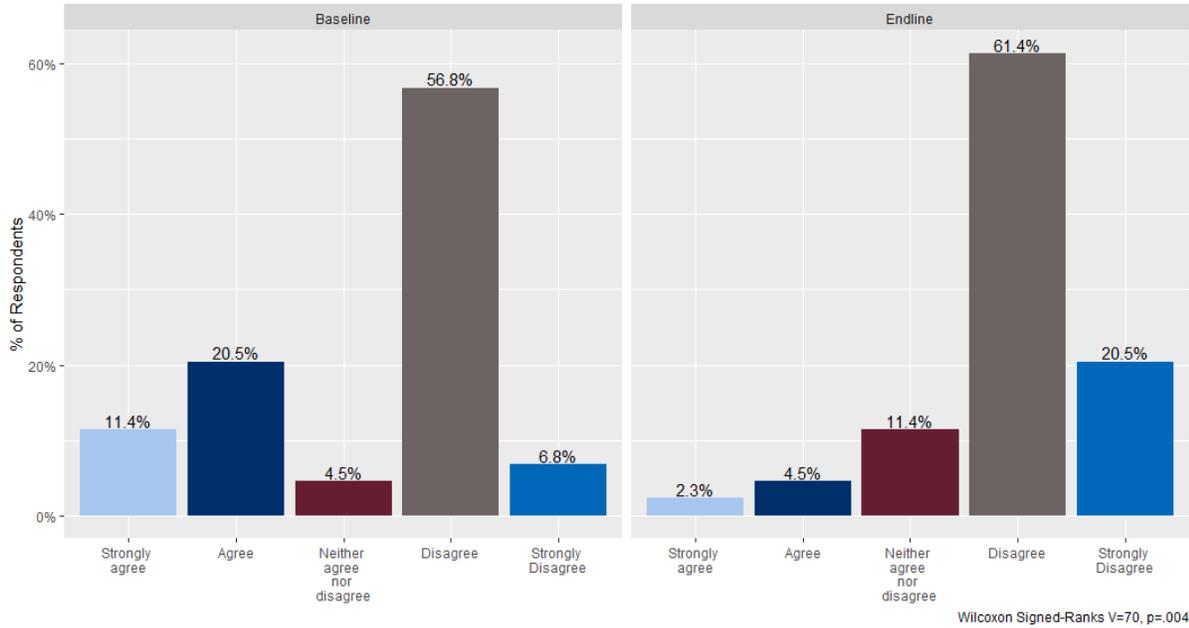
Women were asked “How comfortable do you feel going to the first aid provider when you are on your period for a menstruation-related issue?”



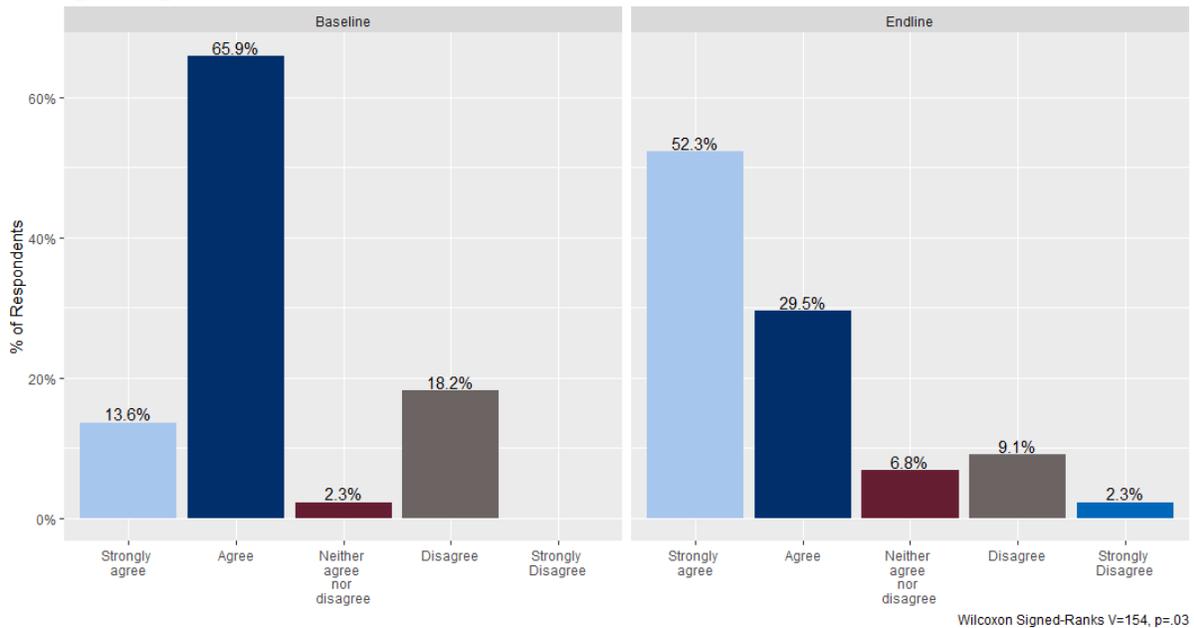
Women were asked “When you bring up an MHM-related issue or ask an MHM-related question to your supervisor or management, how respectfully do you feel they respond?”



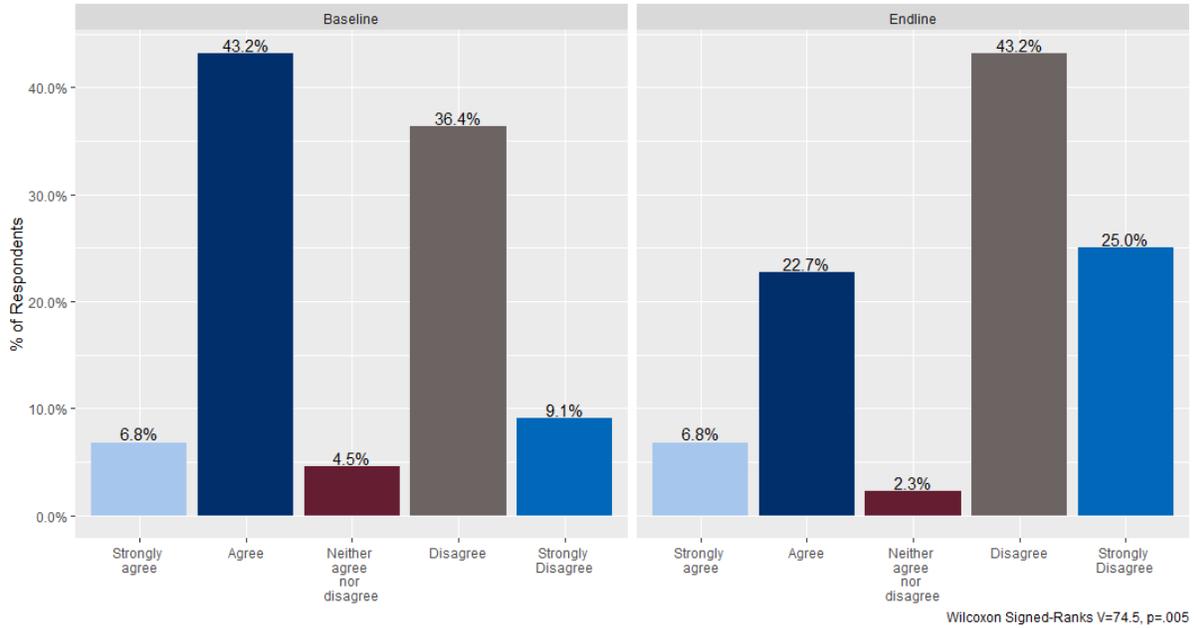
Presenteeism: We measured presenteeism through six 5-point Likert Scale questions. Total score ranged from 0-24. Women were asked whether they agreed with the following statement “Because of your menstrual period, the stresses of your job were much harder to handle.” The score ranged from 0 (Strongly disagree) to 4 (Strongly agree).



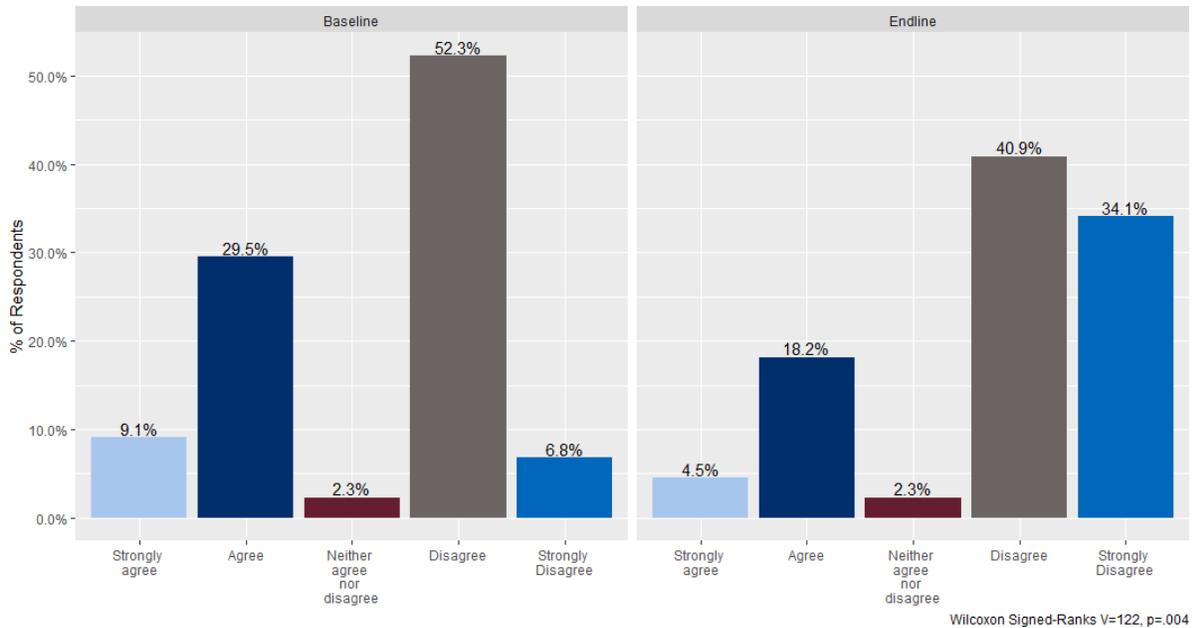
Women were asked whether they agreed with the following statement “Despite having your menstrual period, you were able to finish hard tasks in your work.” The score ranged from 0 (Strongly agree) to 4 (Strongly disagree).



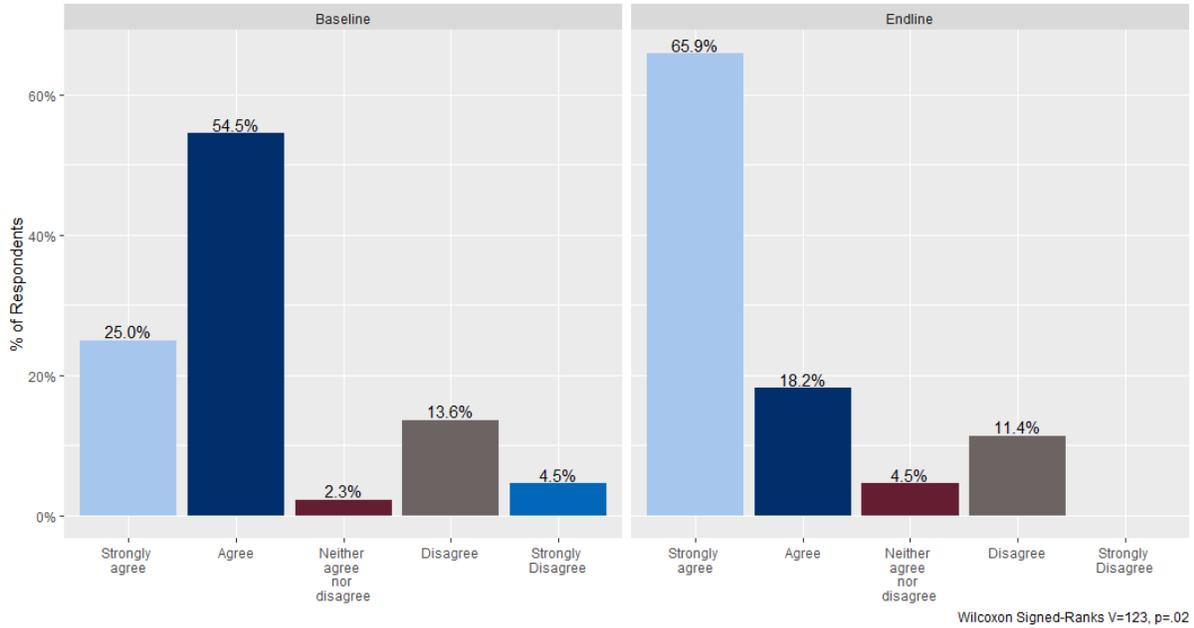
Women were asked whether they agreed with the following statement “Your menstrual period distracted you from taking pleasure in your work.” The score ranged from 0 (Strongly disagree) to 4 (Strongly agree).



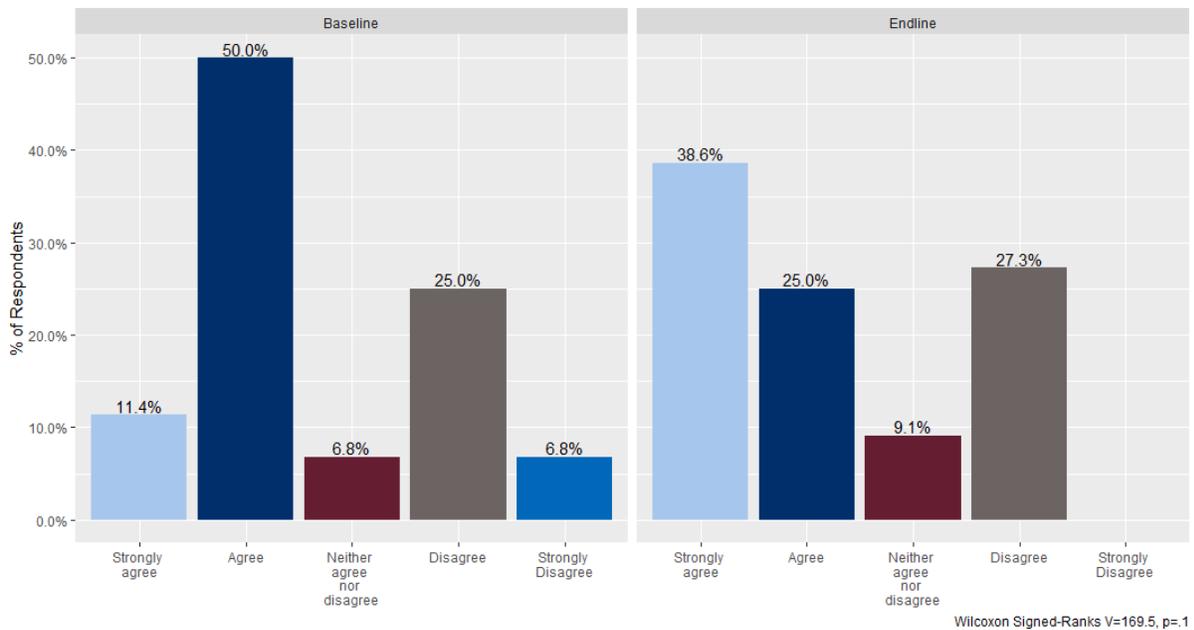
Women were asked whether they agreed with the following statement "You felt hopeless about finishing certain tasks at work, due to your menstrual period." The score ranged from 0 (Strongly disagree) to 4 (Strongly agree).



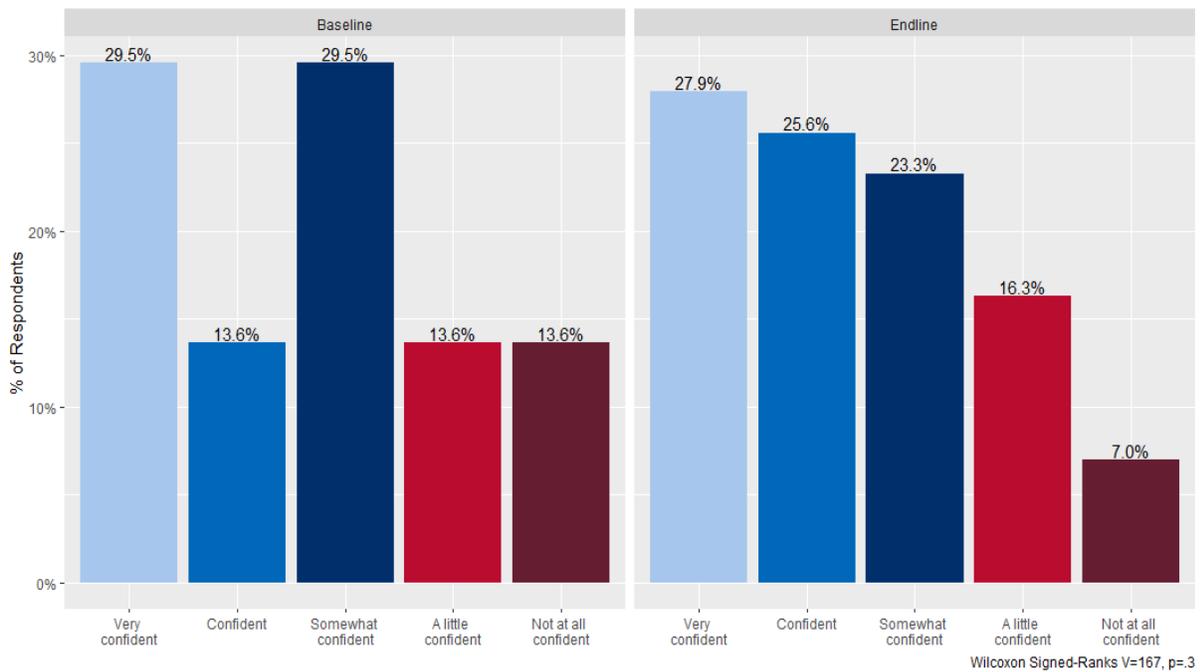
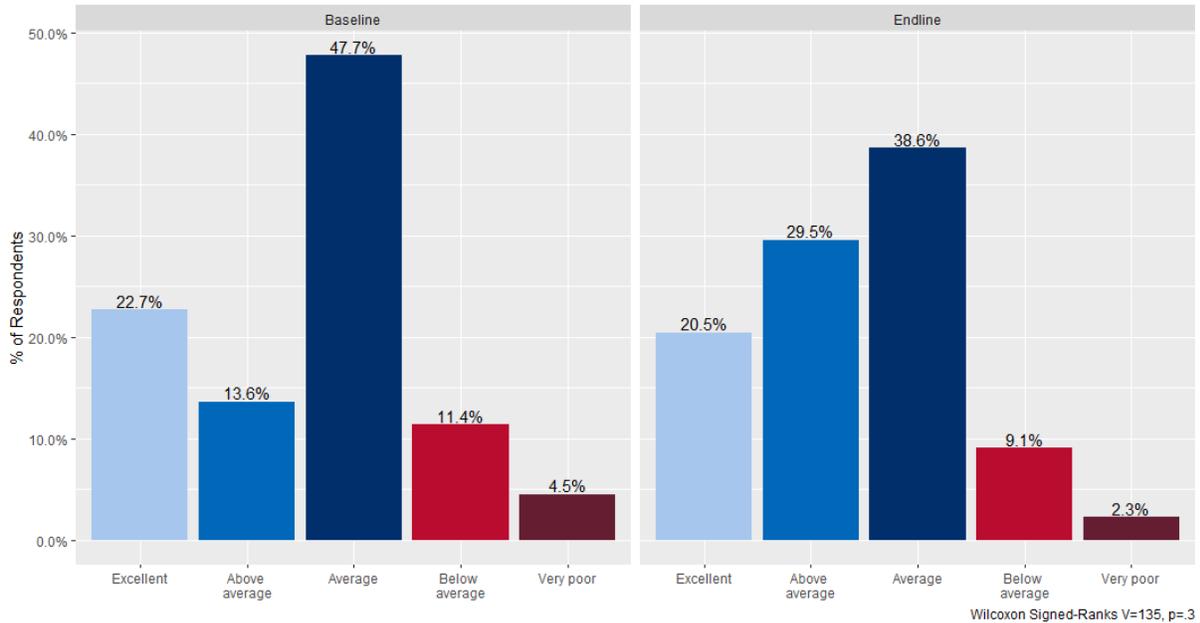
Women were asked whether they agreed with the following statement "At work, you were able to focus on achieving your goals despite your menstrual period." The score ranged from 0 (Strongly agree) to 4 (Strongly disagree).



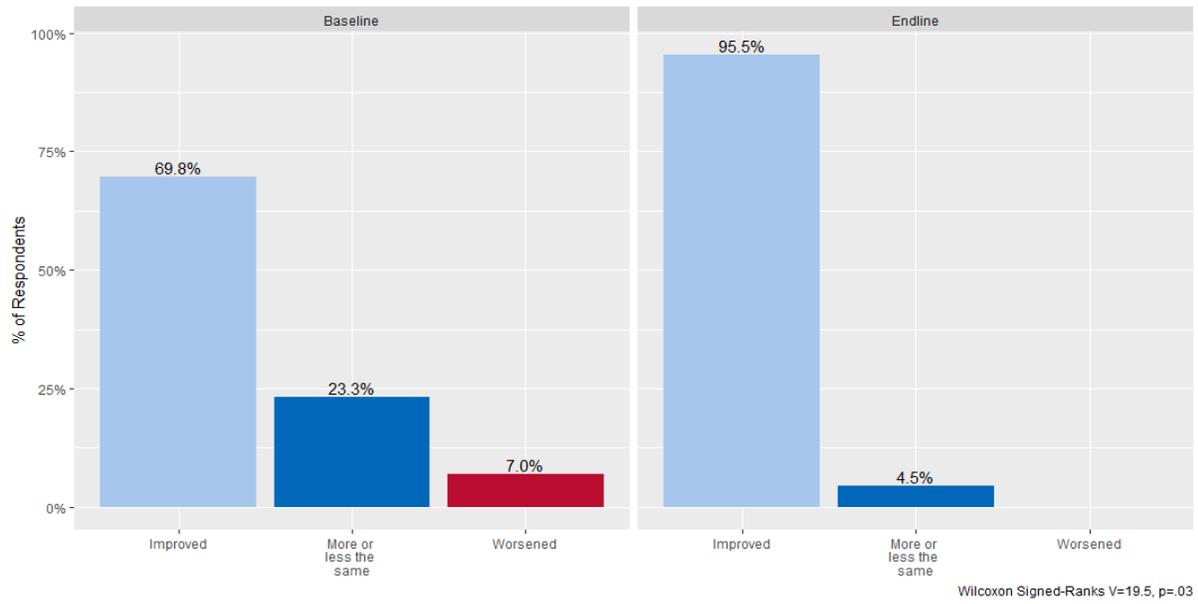
Women were asked whether they agreed with the following statement “Despite having your menstrual period, you felt energetic enough to complete all your work.” The score ranged from 0 (Strongly agree) to 4 (Strongly disagree).



Self-efficacy: We measured self-efficacy through two 5-point Likert Scale questions. Women were asked “How would you rate the quality of your work while on your period?” and “How confident do you feel that you can meet your personal production targets on time while on your period at work?” Scores ranged from 1 (Very poor; Not at all confident) to 5 (Excellent; Very confident), with a total score range of 2-10.



Job satisfaction: We measured job satisfaction through a 3-point Likert Scale question. Women were asked “Compared to this time last year, would you say your satisfaction with your job has improved, stayed more or less the same, or worsened, overall?” Scores ranged from 2 (Improved) to 0 (Worsened).



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