

EMPOWERING FEMALE TALENT: STRATEGIES FOR SUPPORTING RETURNING MOTHERS AND INCREASING FEMALE REPRESENTATIONS IN SOUTH ASIA ENERGY

A Case Study: Pakistan, Water & Power Development Authority (WAPDA)

July 29, 2024

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Keywords: Gender integration in the energy sector, returning mothers, women's workforce retention, family-friendly policies, in-house childcare solutions, renewable energy jobs, regional energy transition, power utilities, South Asia, Pakistan, WAPDA, WePOWER Network, World Bank

Executive Summary

This study highlights the development of an in-house childcare facility at the Water & Power Development Authority (WAPDA) in Pakistan, a leading public power generation company in South Asia. The South Asia regional energy transition is shifting to renewable energy sources, and is calling on diverse professionals, including women, to form an innovative workforce. Currently, South Asia has low representation of women in the energy sector workforce as marriage and childcare are traditionally seen as incompatible with professional careers. Using an online survey and a case study approach, this study investigated how power utilities in South Asia support mothers returning to work and identified the most effective policies to increase the retention of women workers in the energy sector. Our findings led to an organizational policy framework to support returning and working mothers, which is categorized into three groups: regulations, incentives, and training.

The online survey targeted human resource departments (HRDs) at major South Asian power utilities and determined employee satisfaction with the policies within the organizational

policy framework. The survey participants suggested that in-house childcare facilities were the most effective policy to retain returning and working mothers, other than policies implemented under national labor laws, such as those related to job security.

At WAPDA, rates of female employment have risen substantially in the last decade with continuous minimal resignations. Their targeted approach to attract and retain female employees has been successful, including establishing in-house childcare facilities for returning and working mothers and single women's hostels for newly recruited young women. This case examines these impactful policies and their repercussions.

Findings

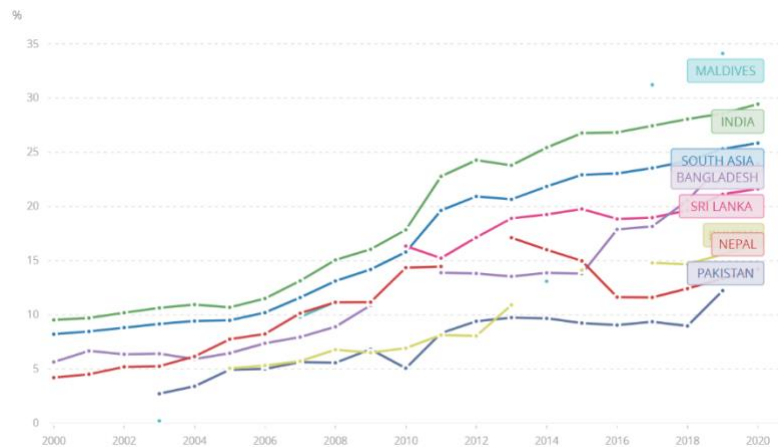
1. Literature Review

1.1. Female Labor Force Participation and STEM Education in South Asia

South Asia¹ has a significant gender gap in labor force participation. The Global Gender Gap Report 2023 ranked Pakistan 143rd out of 146 countries using the Economic Participation and Opportunity Index, and many other South Asian countries have similar scores.ⁱ The Organization for Economic Co-operation and Development (OECD) explains that a minimum qualification for labor market

participation is the completion of upper secondary school. Tertiary education has expanded worldwide in recent decades.ⁱⁱ The OECD argues that “education contributes to greater productivity and

Figure 1: School enrollment, tertiary (% gross)
- Source: World Bank based on UNESCO data



¹ Comprises seven countries in this study: Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka.

economic growth,” and shows that people with higher levels of education can find jobs, continue their work, and learn more job-related skills, so they earn more throughout their lives than people with lower levels of education.ⁱⁱⁱ Globally, a larger percentage of young women (forty-five percent) obtain tertiary education, compared to thirty-nine percent of men.^{iv} Following this global trend, South Asian countries’ tertiary school enrollment rates have increased from eight percent in 2000 to twenty-six percent in 2020 (Figure 1). Furthermore, the female share of graduates in engineering, manufacturing, and construction programs is among the highest worldwide in the South Asian countries of Bangladesh, India, Sri Lanka, and Bhutan (Figure 2). However, South Asian Female Labor Force Participation (FLFP) rate has fallen in recent decades, especially in India (Figure 3). South Asia’s average FLFP rate was at twenty-two percent in 2021, a decrease of five percent from twenty-seven percent in 2010. The International

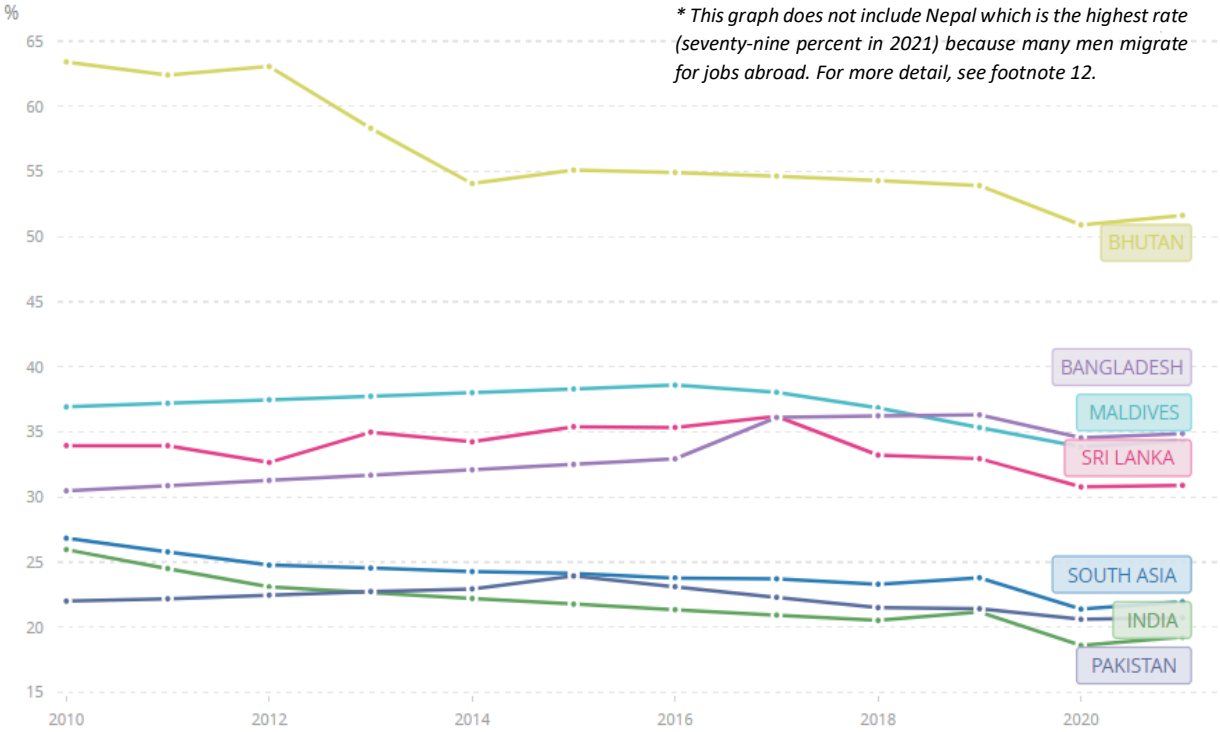
Figure 2: Female share of graduates in Engineering, Manufacturing and Construction programs, tertiary (%)
- Source: World Bank

County	Rank	% of women	WB data Year
Benin	1	54.7%	2015
Brunei	2	52.2%	2018
<u>Bangladesh</u>	<u>7</u>	<u>46.1%</u>	<u>2018</u>
Vietnam	25	37.0%	2016
Sweden	40	32.7%	2017
India	<u>44</u>	<u>30.8%</u>	<u>2018</u>
<u>Sri Lanka</u>	<u>55</u>	<u>28.4%</u>	<u>2018</u>
Singapore	62	27.7%	2017
France	71	26.1%	2016
<u>Bhutan</u>		(24.9% circa 2013, ranked 77)	<u>2019</u>
Norway	80	23.8%	2017
Australia	83	23.2%	2016
Finland	90	22.1%	2017
Egypt	95	20.9%	2016
United States	98	20.4%	2016
Canada	102	19.6%	2016
Korea	114	16.6%	2015
Japan	121	14.1%	2017
<u>Nepal</u>		(23.95% circa 2013, ranked 122)	<u>2019</u>
Ethiopia	124	13.7%	2010
Mauritania	126	11.1%	2017
<u>Maldives</u>	<u>116</u>	<u>10.42%</u>	<u>2017</u>
Congo	128	9.7%	2016
Niger	134	7.4%	2018
Afghanistan	136	4.0%	2014
Saudi Arabia	137	2.6%	2018
<u>Pakistan</u>		<u>n/d</u>	<u>2019</u>

* This WB data did not have Pakistan, but the SAGE baseline assessment in 2018 with a limited sample shows twenty-three percent.

Labor Organization (ILO) in India claims that women’s labor force participation rates in developing countries are affected by more variables than men, such as the country’s economic growth, household economic conditions, individual education levels, fertility rates, the existence of family members support, company’s HR policies, and social norms.^v

Figure 3: Labor force participation rate, female (% of female population ages fifteen+) - Source: World Bank based on ILO data

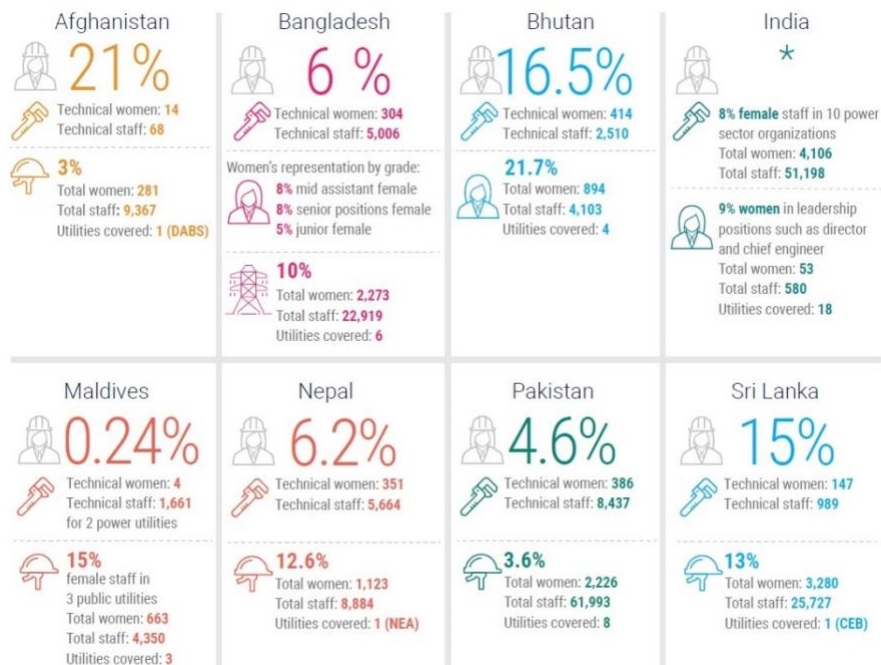


1.2. Women in the South Asia Energy Sector

Due to the recent economic growth in South Asia, regional energy demands have rapidly increased, resulting in a surge in emissions. The International Renewable Energy Agency (IRENA) estimated that this transition requires 139 million new jobs globally by 2030.^{vi} However, the energy sector has traditionally been male-dominated. The International Energy Agency (IEA) indicated that only sixteen percent of energy sector employees are women, despite women representing forty percent of the worldwide workforce, and female representation in the

South Asian energy sector is particularly low, with only three to twenty-five percent of women represented in thirty-five major power utilities (Figure 3), and among those, most are in low and mid-level non-technical roles.^{vii, viii} This, in turn, leads to limited leadership opportunities and limits the development of female-friendly policies.

Figure 3: Women's Representation in the South Asia Power Sector Organizations (2018)
- Source: World Bank South Asia Gender and Energy Facility (SAGE)

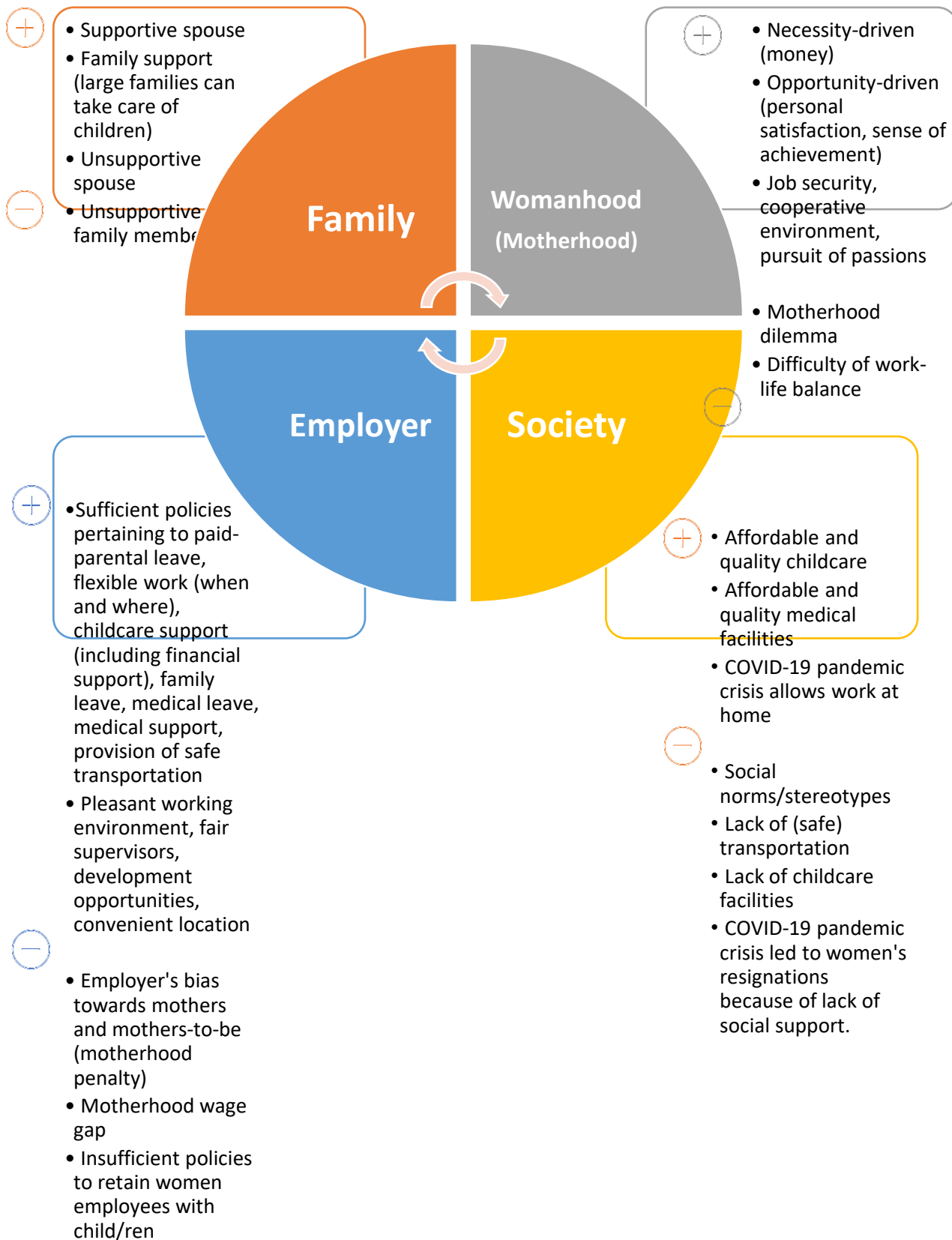


Four Factors Impact South Asia Women's Decision to Remain in the Workforce

South Asian women, like all women worldwide, face the challenge of pursuing careers and motherhood simultaneously as they struggle to balance professional responsibilities with caring for children and managing household tasks.^{ix, x, xi, xii} Studies show that working mothers in South Asia often feel guilty when having to decide between home and workplace responsibilities.^{xiii, xiv} This dual guilt cycle, called the motherhood dilemma, is further intensified when mothers return to work after maternity leave, and reflects social norms as family and society significantly influence expected gender roles.^{xv, xvi, xvii} A lack of family-friendly organizational policies often forces working mothers to leave their jobs due to societal and personal pressures.^{xviii}

These four factors—family, society, womanhood (motherhood), and employers—are not isolated entities but are instead all interconnected, and influence women's decision to return to and remain in the workforce (Figure 4).

Figure 4: The four factors influencing women's decisions are intricately intertwined.



1.3. Retaining Female Employees Benefits Employers

Increasing the number of female employees' benefits employers. Turnover can incur direct costs ranging from one to two years of the employee's salary and benefits, including expenses for recruiting, training, and lost productivity. Intangible costs also come into play, such as knowledge outflow, workplace security measures, and damage to employee morale.^{xix,xx} Nevertheless, paid maternity leave accounts for four to nine months of base salary in South Asia (Appendix-1), which is significantly less than the costs associated with employee turnover. Additionally, innovation is critical in the current energy transition.^{xxi} A 2011 study showed a positive linkage between employee diversity in gender and education and a firm's innovative performance due to an open culture towards diversity.^{xxii} Since women play an essential role in shaping a positive workplace culture, studies show that companies with more female employees have a workforce with greater job satisfaction, dedication, and reduced burnout.^{xxiii}

1.4. Maternity Leave Policy in South Asia and Power Utilities

This study focuses specifically on working mothers for power utility companies in South Asia because it is a rapidly expanding sector, and the regional energy transition requires a significant increase in professional jobs. Power utilities often operate as monopolies or semi-monopolies in compliance with national labor laws. As a result, regular female employees of these companies work as civil servants and receive benefits including paid maternity leave and job security, providing advancements towards gender equity.

All countries in South Asia have laws mandating paid maternity leave, ensuring that employers cover 100 percent of the base salary (Appendix-1). Leave varies from eighty-four to 180 days, the equivalent to four to nine months, which benefits regular employees of companies of more than ten employees. However, an Indian study showed that the policy covers fewer than

6.4 percent of Indian working women.² Nevertheless, this policy is vital for working mothers, providing them with the necessary time and financial security to care for their newborns.

1.5. Organizational Policy Framework

The Organizational Policy Framework for Supporting Returning and Working Mothers in South Asia Power Utilities (Figure 5), developed as part of this study, consists of nine sections grouped into three categories: regulations, incentives, and training, and encompasses a total of twenty-four policies.

Regulations enclose various policies mandated by national labor laws, including maternity, annual, medical, and family leaves, equal employment and salary, and job security which can be utilized by new mothers when returning from maternity leave. Power utilities in South Asia are expected to provide these policies. Additionally, promoting female leadership can help effectively implement family-friendly policies. These policies mainly include, childcare, lactation, additional support for both medical and wellness factors, as well as flex-work and safe transportation options.

The International Financial Corporation (2019) emphasizes that quality, affordable childcare is a significant driver of access to better job opportunities for women.^{xxiv} Appropriate policies and investments in workplaces, such as access to breastfeeding and pumping spaces, help protect and promote breastfeeding for new mothers.^{xxv}

Flexible work arrangements and safe transportation options are meaningful for all employees, but particularly expectant, new, and working mothers.^{xxvi} Post-pandemic, many

² Calculation: In India, at least 70% of women are out of the labor force =30% of women are working. (1) 84% of them are self-employed or work in small companies with less than ten employees, which are not qualified of the policy = the remaining 16% are women working at organizations, and (2) among them, 60% are part-time or informal contractors who cannot access the policy = the remaining 40% are regular staff. As a result, only 16% x 40% = 6.4% of women in the country who are eligible for the policy (Rajagopalan and Tabarrok 2019)

companies continue to offer work-from-home or hybrid work assignments, which can be beneficial for mothers returning to work, as it enables them to balance their career and family responsibilities.^{xxvii} As transportation presents a significant obstacle for South Asian women to access work due to social norms, home-to-work transportation services provide extra safety for pregnant and new mothers who return to the workplace.^{xxviii, xxix}

Figure 5: Organizational Policy Framework for Returning and Working Mothers for South Asia Power Utilities

Regulations	1. Women’s Representation in Decision-Making Positions
	2. Organizational Policies Related to National Labor Law
	A. Paid maternity leave
	B. Paid paternity leave
	C. Annual leave (vacations)
	D. Medical and family leave
	E. Equal employment and salary (to avoid Motherhood Pay Gap)
Incentives	F. Job security
	3. Childcare Support
	A. In-house childcare facility
	B. Childcare financial allowance
	4. Lactation Support
	A. Private space with basic amenities (lactation room)
	B. Time break for pump or breastfeeding
	5. Additional Medical and Wellness Support
	A. Medical service or medical insurance
	B. In-house medical clinics
	C. Mental-health counseling for postnatal depression
	D. Others (ex. In-house gyms, Pregnancy wellness)
	6. Flexible Work
	A. Flex-time work option
	B. Work-at-home option
	C. Assignment arrangement option
	D. Consultation with the manager or HR department after maternity leave
7. Safe transportation	
A. Provision of transportation for female employees (pick-up and drop-off service)	
B. Transportation financial allowance	
Training	8. Re-skilling learning opportunities for returning mothers
	9. Knowledge sharing from experienced working mothers
	A. Mentoring program for new mothers
	B. Featuring role model of working mother employees in the organization

2. Online Survey of Ten Major Power Utilities

2.1. Survey Design

This study involved an online survey of ten major power utilities in South Asia (Figure 6) from August 1–20, 2023, aiming to understand the number of policies that are implemented that pertain to working mothers in the workplace and to identify the most effective policies for retaining women employees within a limited budget under the framework.

The participants were members of the Returning Mothers Regional Working Group (RWG), which consists of ten partners in the WePOWER network.³ A designated officer, primarily from the human resources department (HRD) of each utility, responded to the online questions. The survey requested them to (1) identify implemented policies in the Policy Framework; (2) assess employees' satisfaction level from the survey participant's view; and (3) reorder the policies to prioritize the most effective ones for retaining female employees with a limited budget.

Ten people, one from each utility (Figure 6), were surveyed. Question 1 had a seventy percent response rate, questions 6-C and 6-D each had a sixty percent response rate, and all remaining questions had a 100 percent response rate.

Figure 6: Online survey participants

<u>Country</u>	<u>Name of a Power Utility</u>	<u>Shorten Name</u>	<u>Organization Type of Power Utility</u>
Bangladesh	Infrastructure Development Company Limited	IDCOL	Public
Bhutan	Bhutan Power Corporation Limited	BPC	Public
Bhutan	Drukgreen Hydropower Corporation Limited	DGPC	Public

³ The network has forty+ partners, mainly South Asian power utilities and energy companies, which demonstrated their commitment to increasing women's representation in professional settings. It is a voluntary women's professional network in Energy and Power Sector in South Asia. The network supports women's participation in energy projects and institutions. <https://www.wepowernetwork.org/>

India	BSES Rajdhani Power Ltd	BSRP	Joint venture company with the government
India	Energy Efficiency Services Limited	EESL	Public
Nepal	Nepal Electricity Authority	NEA	Public
Pakistan	Water and Power Development Authority	WAPDA	Public
Pakistan	Karachi Electric	KE	Private
Sri Lanka	Ceylon Electricity Board	CEB	Public
Sri Lanka	Lanka Electricity Company	LECO	Private

2.2. Survey Results

Appendix-2 includes the detailed results of the survey. All utilities enforced policies related to national labor laws in the regulations category, including maternity, annual, medical, and family leaves, and equal employment and salary, and most had implemented a job security policy. However, only fifty percent of the organizations have females in decision-making positions, and thirty percent of companies declined to provide an answer to this question. The results indicate that each utility has its own prioritized policies in the incentives and training categories, likely due to each company's respective capacity, commitment, strategy, and budgetary constraints. The survey results show an interconnection between these identified policies. For example, among the surveyed utilities that offered in-house childcare in headquarters, half had in-house lactation rooms inside or next to the childcare, while the half without in-house childcare provided lactation rooms in all workstations, not only in headquarters.

Consequently, it is difficult to isolate the efficacy of a single policy, and instead reveals that policies are interconnected.

Figure 7: Results of the survey question: "Please reorder the policies. Under the limited budget, what is the most effective policy to allocate resources to retain returning and working mothers?"

Rank	Selected policy	Policy Category in the Framework
1 st	Job Security	Regulations
2 nd	In-house Childcare Facility	Incentives
3 rd	Parental Leave Policy	Regulations
4 th	In-house Lactation Room	Incentives
5 th	Transportation Service	Incentives
6 th	Childcare Allowance	Incentives

The survey requested that participants specify their policy priorities for retaining working mothers in the event of budget constraints (Figure 7). Half of the participants identified job security as their top priority, followed by in-house childcare and the paid parental leave policy.

Despite the benefits of childcare support for working mothers, the online survey showed that forty percent of participating companies did not provide childcare facilities or allowances.^{xxx,xxxi,xxxii,xxxiii} Only forty percent had in-house childcare facilities at their headquarters, and the remaining twenty percent provided only allowances for childcare. Of those companies that provide in-house childcare, three-quarters of them reported substantially higher satisfaction rates, while the remaining one-quarter reported that they were not using the facilities due to a lack of air conditioning, and consequently, had the lowest reported satisfaction rates. This suggests that investing in in-house childcare facilities could improve retention and satisfaction among working mothers, but maintaining the facility and meeting users' satisfactions are crucial to providing it.

2.3. Case Study Selection

This case study approach enabled the capture of essential factors through both quantitative and qualitative data. The survey found that the framework policies are interconnected and mutually supportive, and no single element is responsible for employee retention or satisfaction. Therefore, a company with a holistic approach to women employee retention is more likely to see improvement.

WAPDA was selected for the case study because: (1) they had incorporated an in-house childcare facility with a high satisfaction rate; (2) they had implemented the most policies within the framework; and (3) they had the potential to serve as a role model for other South Asian power utilities due to their size, transparency, and employee satisfaction.

3. Case Study – In-house Childcare Facility at WAPDA

In 2020, Irfan (2022) examined the integration of women in the Pakistan energy sector through a case study of WAPDA. This involved conducting an online survey with forty-four WAPDA engineers, of whom twelve were female (27.2 percent), and interviewed them on topics of retention, leadership, advancement, and policies for institutional change. The study revealed that there were few female top leaders in the Pakistan energy sector and over half of the interviewees believed that women tend to leave their careers prematurely.^{xxxiv}

The case study involved a close partnership with the WAPDA HRD and gathered data directly from them while conducting interviews with the current and former General Managers of HRD (GM-HRD), as well as the Deputy Director of HRD (DD-HRD). Despite the limited data availability, this case highlights the valuable insights provided by WAPDA and serves as a compelling example of the positive impact

Figure 8: WAPDA officer's BPS and equivalent title and ages – Source: WAPDA HRD

<u>Basic Pay Scale</u>	<u>Equivalent Title</u>	<u>Ages Around</u>
BPS 14	Clerks	18-25
BPS 15	Assistant	18-25
BPS 26	Assistant Private Secretary	not specific
BPS 17	Assistant Director	22-35
BPS 18	Deputy Director	35-45
BPS 19	Director	Over 45
BPS 20	Director General	
BPS 21	Chairman	

of how the power utility successfully retained women, including job security policies, in-house childcare facilities, and single women's hostels for newly recruited women. Figure 8 shows the WAPDA

officer's base pay scale (BPS) and equivalent title and ages.

3.1. Overview of WAPDA Welfare Policies

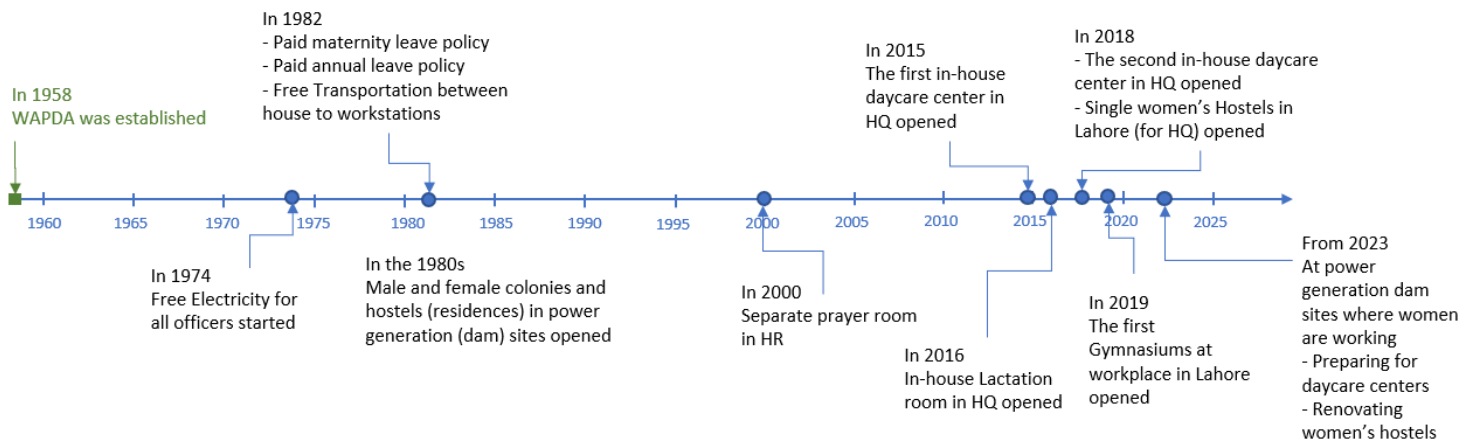
In 1958, WAPDA was established through an act of parliament for integrated and rapid development and maintenance of water and power resources of the country. The former GM-HRD explained through the interview that "WAPDA has a long-standing history of providing comprehensive welfare programs for all its employees since it was established." Figure 9 shows

the overview of WAPDA welfare policies, and Figure 10 indicates the timeline for implementing these policies, showing that WAPDA has focused on implementing more retention policies for female employees since 2015.

Figure 9: Overview of WAPDA welfare policies, created by the author – Source: WAPDA HRD

<u>(1) to ATTRACT all employees</u>	<u>(2) to RETAIN female employees</u>
Job Security (<i>WAPDA Efficiency and Discipline Rules</i>) (1974)	Wedlock Policy by Punjab Government (1973)
Free Electricity Supply (1974)	Separate Prayer Room (2000)
Free Transportation Facilities between an employee’s house and each workstation (1982)	Paid Maternity Leave for new mothers (1982)
Free Colonies and Hostels (Residence) (1980s)	In-house childcare for Female employees in WAPDA House (HQ) (2015, 2018)
[CSR] Free High-quality Education in the country, 16 WAPDA public schools for citizens (1980s)	In-house Lactation Room in WAPDA House (HQ) (2016)
[CSR] Free Medical Services across the country, ⁴ WAPDA hospitals providing to WAPDA and client companies’ employees and their dependents (1980s)	Single women’s Hostels in Lahore (Residence) (2018)
Gymnasiums in WAPDA House and Lahore offices (2019)	The gyms in the workplaces offer designated time slots exclusively for women (2019)
Work-from-home option as case-by-case (2020)	

Figure 10: WAPDA History of commencement of each policy and facility, created by the author – Source: WAPDA HRD



The former GM-HRD stated:

WAPDA provides comprehensive support for women, so women retain or do not quit the company. Such as, they can take maternity leave, they can use WAPDA hospital as

⁴ WAPDA Medical Services, 12 Regional Groups consisting of 12 Hospitals, 13 Fortified Dispensaries and 17 Basic Dispensaries spread all over the country.

OB/GYN with incubators and special treatment, and pediatrician, then they can use childcare facility in WAPDA utilizing WAPDA transportation. We have all these facilities available for women.

WAPDA found that a holistic approach to leveraging support for women, especially working mothers, instead of implementing a single policy, improved retention and satisfaction.

3.2. Maternity Leave

WAPDA showed that in 2022, 65 women (6.38% of all female employees) took maternity leave, and all returned to work (Figure 11). The former GM-HRD explained:

Once women get pregnant, they used to quit a job because there was no childcare, no family member can look after their infants. So, after her delivery, how she can come to a job? There was no facility for them before in WAPDA. Maternity leave provides time for new mothers to rest and prepare to come back to job.

Figure 11: Ratio of women who returned to work after maternity leave in 2022 – Source: WAPDA HRD

<u>WAPDA employees under 50 years old</u>	<u>All Female Employees (All BPS)</u>	<u>Female Directors (BPS 19 or above)</u>
Currently Employed	1,018	13
Number of employees who took maternity leave in the past 12 months.	65 (6.38% of female employees)	0
Number of the employees who returned from maternity leave.	65	0
Percentage of return from maternity leave in the past 12 months	100% returned	N/A

The DD-HRD added:

All women who took maternity leave returned to work. This phenomenon has not started now, and it is consistent within WAPDA for a long time, which is different from typical Pakistani working women. Most women in Pakistan leave their jobs and cannot pursue their careers after marriage, especially after childbirth. On the other hand, WAPDA women stay in their jobs after giving birth because of the job security policy.

She attributed the high returning rate of women after maternity leave to the WAPDA Efficiency and Discipline Rules (WAPDA 1978). It provides a job security by official regulation,

preventing the company from easily terminating employees once they are hired. This policy benefits all employees, but also includes protections for women when returning from maternity leave.

3.3. Employee Recruitment and Retention

From 2010 to 2023 WAPDA was a male-dominated workplace with a rising percentage of female employees. As of June 2023, women make up 6.62 percent of WAPDA all employees (Figures 12 and 13).

Figure 12: Number of WAPDA employees and officers (female and male) from 2010 to 2023, created by the author - Source: WAPDA HR

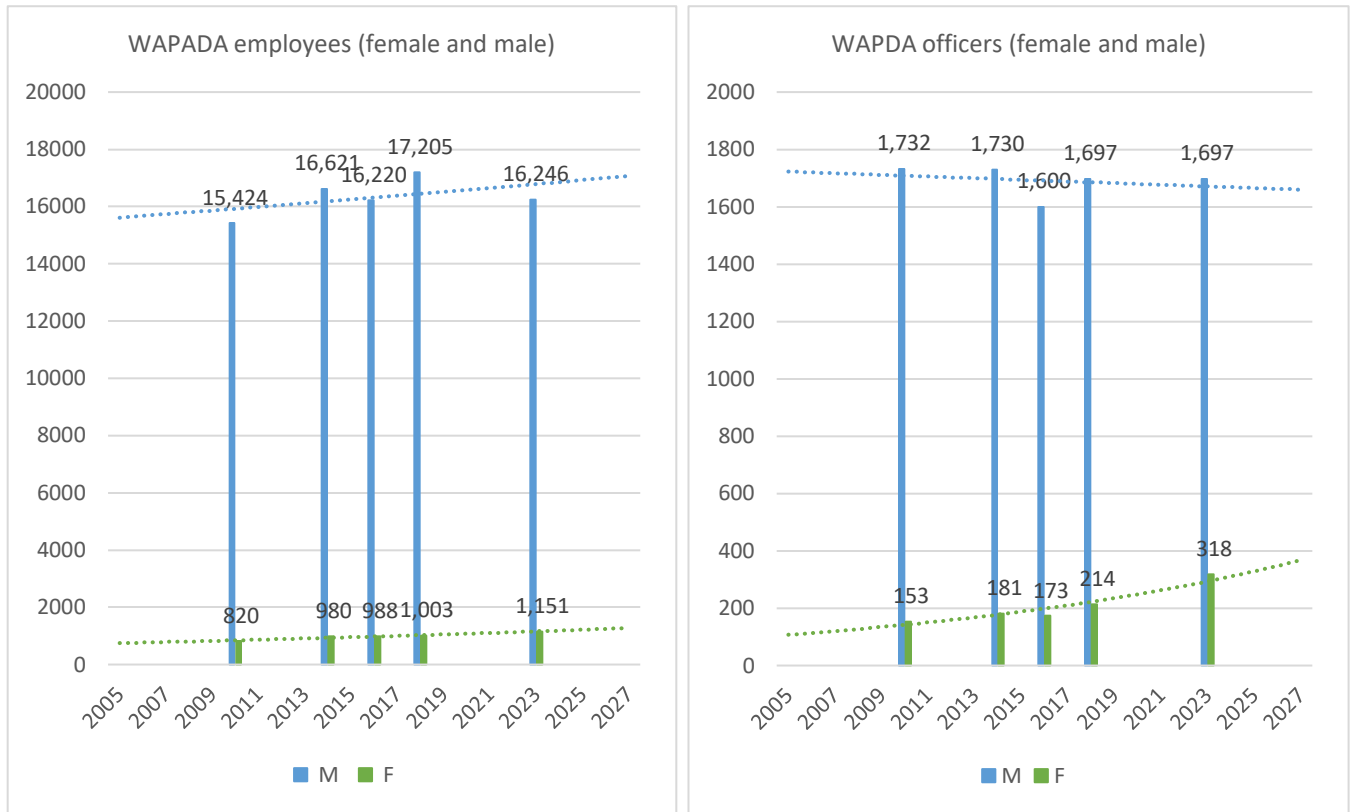
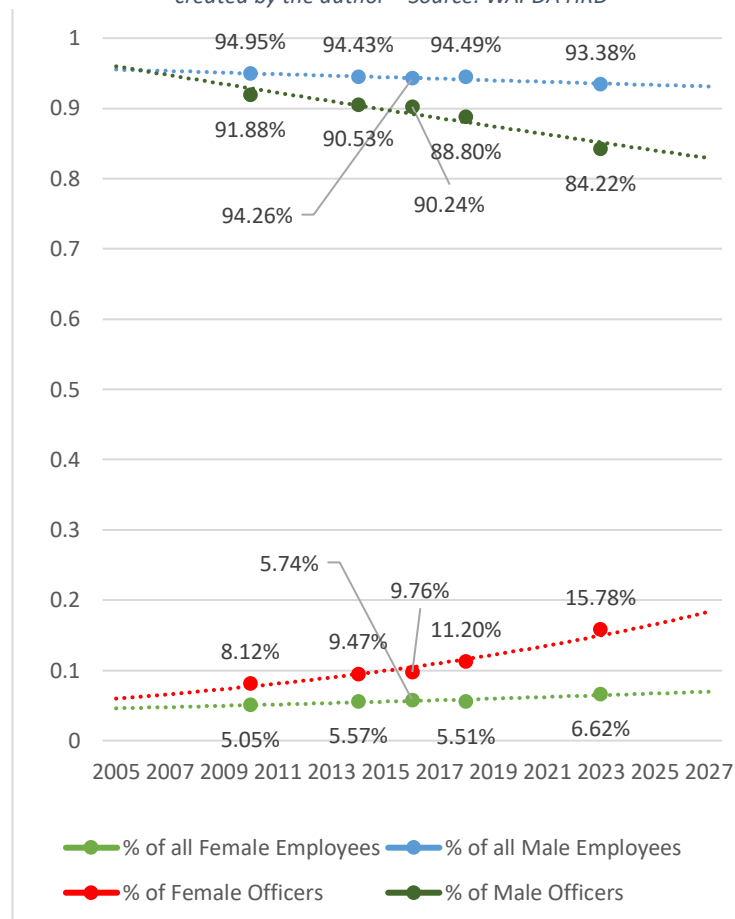


Figure 13: Percentage of employees and officers (female and male) from 2010 to 2023, created by the author - Source: WAPDA HRD



WAPDA has a very high retention rate of women employees. From 2010–2022, only five female employees resigned from WAPDA (data not shown). The DD-HRD explained:

Two left due to marriage, one due to a job rotation to the headquarters, one due to study abroad, and one changed her career to a local government position. All five employees had less than two years of service and were younger staff, meaning BPS 14 or 17. If female employees leave WAPDA, it is usually early on, while others stay longer.

The former GM-HRD elaborated:

Once women get pregnant, they used to quit a job because there was no childcare, no family member can look after their infants. ... Also, newly hired young women in rural area live together with their parents basically. But WAPDA is a government job, and it has job rotations in all the country, like every 3 years, they must move to another place and learn more and exposure to different jobs. However, sometimes their parents are reluctant to send daughters to other place and Lahore, then these women decide to leave the company.

Cultural and social norms influence played a significant role in WAPDA women's decision. As more women employees and officers joined WAPDA, the company expected resignation rates to increase at a corresponding rate due to cultural norms and family commitments of their female employees, yet resignation rates have remained minimal.

3.4. Targeted Approach for Retaining Women Employees

WAPDA has shown a strong commitment to supporting women in the workforce by introducing new policies, namely through new in-house childcare facilities in 2015 and 2018, a lactation room in 2016, a women's hostel in Lahore in 2018, and exclusive access time for women at the gym in 2019. The former GM-HRD indicated that they, “prioritized to establish women's hostels in all over the country including Lahore, which single young women can also use, and in-house childcare facilities for working mothers.” WAPDA employed a comprehensive approach to effectively retain women by addressing resignation reasons resulting from cultural reasons, which included providing support for returning and working mothers, and newly recruited young female employees.

3.5. Initiatives to Support Returning and Working Mothers

Cultural influences played a significant role in WAPDA's employment policy decisions. Pakistani working mothers bear a disproportionate burden of family responsibilities, especially childcare. Hence, in the case of WAPDA, female employees have exclusive access to in-house childcare facilities. The DD-HRD emphasized:

It is critical to have 'in-house' childcare facilities. Ideally, each office provides it to support returning and working mothers. ... Most women in Pakistan leave their jobs and cannot or do not pursue their careers after marriage or pregnancy. Many don't have appropriate family support or any secured facilities for their kids, so they need to quit their jobs to look after their children. They can't maintain a work-life balance.

She affirmed that providing affordable in-house childcare facilities with solid security at the workplace is the most effective way to retain female employees.

Since 1982, WAPDA has offered a home-to-work transportation service for all employees, which enables working mothers to conveniently bring their children (under four) to the WAPDA headquarters for childcare and then safely transport them home once they finish work. Additionally, a lactation room was set up inside the childcare facility. The current GM-HRD explained that "WAPDA is now expanding our childcare facilities to all workstations, including power generation dam sites, following their success at the headquarters." WAPDA's in-house childcare clearly illustrates the interconnection of their family-friendly policies, highlighting the childcare facility receives from and provides to other relevant policies.

3.6. Challenges of Establishing In-house Childcare

To implement women-friendly policies the former GM-HRD argued that "there are mainly three stakeholders we need to manage. The Authority, which is the Pakistan Government, our employees, and the facility users." The collective efforts, solidarity of women, and strong leadership of senior management were crucial in successfully opening and maintaining the

WAPDA in-house childcare facility, despite facing challenges and ensuring safety and user satisfaction.

The Authority’s Approval and Financing

The DD-HRD mentioned that securing approval and financing of the policies required the Authority’s approval and consensus between broad internal stakeholder. She explained that she and the HRD team were moved by the “strong will” of the female employees. Before approaching the Authority, the WAPDA HRD thoroughly researched private and public daycare centers to gather key information on costs, required staff, and other essentials. They secured financing and found a suitable location for the childcare to pass the Authority's examination, and they developed a strategic plan to renovate the headquarters, with an estimated initial renovation cost of Rs. 1.3 million [~USD \$18,859] including refurbishing the room, appliances, washroom, toys, and daycare furniture. The annual maintenance cost was projected at Rs. 6 lakhs [~USD \$6,286]. The DD-HRD shared that: “The working mothers eager to use the childcare were willing to pay the monthly fees (estimated at Rs. 3,000 [~USD \$36.25]).” WAPDA agreed to cover all utility bills, such as electricity and water. Through meticulous planning and consideration of financial issues (Figure 14), the team successfully resolved these challenges.

Figure 14: WAPDA's costs for In-house Childcare Facility – Source: WAPDA HRD

<u>Items</u>	<u>2019 data by 2020 rate to USD</u>
Capital Cost	18,859 USD
Annual rent of space/building	15,715 USD
Annual Pay & Allowance of Staff	15,087 USD
Annual Repair Maintenance and Utilities Charges (to be borne by WAPDA)	6,286 USD
Each facility user's monthly fee	Free * Initially Rs. 3,000 (36.25 USD)/month, then Rs 4,500 (48.33 USD)/month. In 2022, the chairman waived it.
Total Expenditure of the First Year	55,947 USD

The HRD used carefully collected data and a strategic plan to convince the Authority to smoothly implement the plan. During the study interview, the former GM-HRD stated:

First of all, I want to emphasize, all the childcare initiative is run by women. This is completely being managed and run by themselves. WAPDA paid money for it, but those are run by these women. ... also, some of the credits go to WePOWER initiative. ... I used WePOWER to get things through easily from the Authority. Some of the policies that I got through from the Authority was under the umbrella of WePOWER. We used to tell them that for example, 'This is our obligations. We have to show our achievement, we have to submit the report what we are doing. Also, this is women's strong initiatives, plus this is good thing for the company.' So, I used all of those things and words and positions to get approvals from the Authority.

Building Internal Consensus

The former GM-HRD stated that overcoming resistance by employees was a significant challenge:

Both male and female employees came against women's empowerment activities. For example, some of them claimed that providing in-house childcare would mainly benefit female employees, which they thought was unfair. Male employees said this was not gender equal, it was only for women. Sometimes they misunderstand a meaning of gender equality. Women also, they claimed it was only for mothers with young children which is unfair. So, if we try to implement something new policy, these kinds of complains come up.

The DD-HRD added, "Some also worried that working mothers might become distracted and spend more time with their kids during working hours." They thought it could potentially affect the overall performance of women employees. However, the former GM-HRD and his team emphasized the importance of changing the mindset of employees by asking them, "Wouldn't you want the organization to treat them well? Your wives and daughters could have access to an in-house childcare facility. Don't you think it is a good idea?" The response was ultimately positive.

Ensuring Safety and Users' Satisfaction

During the implementation process, The DD-HRD emphasized that the safety of children was a top priority of the WAPDA HR team. Her team carefully selected nannies through word-of-mouth referrals and interviews based on people's trust. Security cameras were installed, and its access was restricted to authorized personnel for monitoring which ensured that working mothers could not access the footage. Throughout this process, the team placed a high value on the trust and satisfaction of the mothers who were using the childcare services. The DD-HRD emphasized that ensuring mothers' satisfaction with the childcare provided at WAPDA headquarters was paramount when managing the in-house childcare facilities.

3.7. Effectiveness of the In-house Childcare Facilities

WAPDA's comprehensive welfare policies, especially the concentrated initiative to support women after 2015, led to a sharp increase in female employees. WAPDA's in-house childcare facilities led to increased job satisfaction and retention rates of especially returning and working mothers, but all WAPDA's policies are interconnected and mutually reinforcing, suggesting that a holistic approach is more effective.

The success of the in-house childcare involved firm commitments from senior management and women's strong will to move them forward. The WAPDA HRD team secured the childcare safety and provided personalized service. WAPDA is now expanding their childcare facilities to other workstations, including power generation dam sites. This initiative follows the successful implementation at the headquarters, which was due to the continued strong leadership and commitment of their senior management, led by the current GM-HRD.

Conclusion

More South Asian women have obtained tertiary education and are qualified to pursue jobs in the STEM field, coinciding with the increasing employment needs of the regional energy transition. South Asian power utilities can support returning and working mothers effectively by implementing policies outlined in the suggested Organizational Policy Framework by pursuing a holistic approach to retention. Ten major South Asian power utilities have already implemented many policies in the established framework. The survey found that it is difficult to isolate the efficacy of a single policy from that of others. This interconnectedness demonstrates the complexity of understanding policy effectiveness. While the survey participants cited in-house childcare facilities as the most effective policy for retaining working mothers, only forty percent of the power utilities who participated in the survey provided them, and childcare facilities alone do not correspond to retention. The approach to retention must be holistic and target female employees' needs, their job satisfactions, and job security.

In the WAPDA case, the number of female employees, especially officers, has boosted in the last decade, and retention rates have remained exceptionally high. WAPDA demonstrated that all policies regarding the recruitment and retention of women are interconnected and mutually reinforcing, suggesting that a holistic approach is more effective than implementing any single policy. Policies such as job security, in-house childcare facilities for returning and working mothers, and single women's hostels for newly recruited women have improved female retention rates. WAPDA employed a targeted approach to address the reasons for women's resignations, resulting in the development of in-house childcare facilities and single women's hostels. The in-house childcare facilities have been supported by a free transportation policy and extended to a women's lactation policy. Moreover, the childcare facilities have increased the job satisfaction of their users, who were returning and working mothers.

However, a strong commitment from senior management and solidarity among female employees was crucial to overcoming challenges with internal and external stakeholders and led to the provision of the childcare initiatives successfully.

Recommendations

This study is an initial exploration of the effectiveness of in-house childcare in South Asian power utilities. This study established the Organizational Policy Framework for Returning and Working Mothers for South Asia Power Utilities. In accordance with this framework, companies should investigate which policies may work best in their workplaces and for their employees. WAPDA held many sessions with employees to discuss their needs and negotiated strategies that would benefit the existing employees and attract new ones. While each company is different, the needs of women across many cultures remain universal as the balance of family and work is complex. Implementing meaningful and helpful strategies for existing employees is imperative for advancing gender parity and equality in the power sector.

Future research could delve into comparing various power utilities with and without in-house childcare facilities within the same country and across different countries in the region. This could contribute to a better understanding of the effectiveness of in-house childcare facilities in retaining returning and working mothers in South Asian power utilities.

Appendix

Appendix-1. Parental Leave Policy in South Asia Countries, as of June 2023

<u>Country</u>	<u>Days</u>	<u>% of Base Salary Paid</u>	<u>Legislation</u>	<u>Responsibility</u>
Bangladesh	120	100%	Labor Act 2011	Employer
Bhutan	120	100%	Labor and Employment Act (Amendment) 2016	Employer
India	120 for the 1 st and 2 nd child 60 for the 3 rd child	100%	Maternity Benefit (Amendment) Bill, 2017	Employer, and Social Insurance
Maldives	60	100%	Employment Act, Sec. 43	Employer
Nepal	60	100%	Labor Act 2017	Employer
Pakistan	180 for the 1 st child 120 for the 2 nd child 90 for the 3 rd child	100%	Maternity and Paternity Leave Act, 2023	Employer
Sri Lanka	84	100% (shops and office workers) 85% (others)	Maternity Benefits (Amendment) Act, 2018	Employer

Appendix-2. The Results of the Online Survey, August 2023

The Organizational Policy Framework											
Surveyed Power Utility ID No.		I	II	III	IV	V	VI	VII	VIII	IX	X
Total Number of Implemented Policies		11	21	11	7	12.5	14.5	13.5	20	15	16
Regulations	1. Women's Representation in Decision-Making Positions		Yes		NO ANSWER	NO ANSWER	Yes	Yes	Yes	Yes	NO ANSWER
	2. Organizational Policies Related to National Labor Law										
	A. Paid maternity leave	182	90	84 + 84 half pay	180	84 + 84 half pay	180	180	120	180	180
	B. Paid paternity leave	15	7			3	10	15	20	10	10
	C. Annual leave (vacations)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	D. Medical and family leave	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	E. Equal employment and salary (to avoid Motherhood Pay Gap)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F. Job Security		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	
Incentives	3. Childcare Support										
	A. In-house childcare facility						Yes	Yes	Yes	Yes	
	Satisfaction level						5	1	5	4	
	B. Childcare financial allowance		Yes					Yes			Yes
	Satisfaction level		5					1			4
	4. Lactation Support										
	A. Private space with basic amenities (lactation room)		Yes HQ and other stations			Yes HQ and other stations	Yes HQ only next to childcare		Yes HQ only in childcare		
Satisfaction		3			4	5		5			

B. Time break for pump or breastfeeding			(Nursing mothers can leave 1 hour earlier)						Interrupt every 4 hours until 2 years old	
5. Additional medical and wellness support										
A. Medical service or medical insurance		Yes	Yes		Yes		Yes	Yes		Yes
B. In-house medical clinics	Yes	Yes					Yes	Yes	Yes	Yes
C. Mental-health counseling for postnatal depression	Yes	Yes							Yes	Yes
D. Others (ex. In-house gyms, Pregnancy wellness)		Yes	Yes			Yes	Yes	Yes		Yes
6. Flexible Work										
A. Flex-time work option	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Satisfaction	3	3	2	2	3	5		5	4	4
B. Work-at-home option		Yes			Yes			Yes (case by case)		Yes
C. Assignment arrangement option	NO ANSWER	Yes		NO ANSWER	NO ANSWER	Yes	Yes	Yes	Yes	NO ANSWER
D. Consultation with the manager or HR department after maternity leave			NO ANSWER	NO ANSWER	NO ANSWER			Yes		NO ANSWER
7. Safe transportation										
A. Provision of transportation for female employees (pick-up and drop-off service) Targets (who)?		Women employees only	All Employees but only pandemic period	All Employees	Executive staff only	Work in shift employees	BPS 10 level or above only	All Employees	All Employees	Women employees only
From where to where?		Residence to work	Residence to work	Residence to work	Not specifically	Residence to work	Not specifically	Residence to work	Residence to work	Residence to work

	Which work location?		At selected work locations	At plants only	At selected work locations	N/A	At all work locations	N/A	At all work locations	At plants (not at HQ)	After 7pm cab or reimbursement
	Satisfaction		5	2	2	2	5	5	5	5	3
	B. Transportation financial allowance	Yes	Yes	Yes	Yes	Yes			Yes		
	Satisfaction	4	5	1	3	4			4		
Training	8. Re-skilling learning opportunities for returning mothers	Yes	Yes			Yes	Yes		Yes	Yes	Yes
	Satisfaction	4	4			3	5		5	4	3
	9. Knowledge sharing on from experienced working mothers										
	A. Mentoring program for new mothers	Yes	Yes								
	B. Featuring role model of working mother employees in the organization		Yes				Yes		Yes		Yes

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