

Occupational Challenges of Women in Male-Dominated Service Sectors: A Study from Dakshina Kannada and Udupi

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Abstract

The study titled "Workplace Challenges Faced by Women Employees at Petrol Stations – A Study with Reference to Dakshina Kannada District" aims to investigate the unique challenges encountered by women working at petrol stations in the Dakshina Kannada (DK) district. The research focuses on key aspects such as physical and mental health impacts, work-life balance, management support, and overall job satisfaction. Primary data was collected through structured questionnaires administered to women employees across various petrol stations within the district. The findings of the study reveal that a significant proportion of women employees experience adverse physical and mental health conditions due to their work, including fatigue, stress, and emotional exhaustion. Additionally, many women report that long working hours reduce their family and social engagement time, although most manage to balance household responsibilities effectively. The study also highlights that while management plays a crucial role in supporting women employees, improvements are needed in addressing grievances and ensuring equal growth opportunities. Statistical tools such as t-tests, chi-square tests, and correlation analysis were employed to analyze the data and test the research hypotheses. The results indicate that workplace conditions significantly impact the physical and mental well-being of women employees and influence their personal lives and overall job satisfaction. The study concludes by emphasizing the need for organizations to develop gender-friendly policies, improve managerial support, offer flexible work arrangements, and enhance safety measures to create a more inclusive and supportive workplace environment for women at petrol stations. These recommendations are essential for fostering job satisfaction, employee retention, and promoting gender equity in the fuel retailing sector.

Keywords: Workplace Challenges, Women Employees, Physical and Mental Health, Management Support, Job Satisfaction and Employee Welfare.

Introduction

In recent years, the number of women entering the workforce has significantly increased, including in sectors traditionally dominated by men. One such sector is the fuel retail industry, where women are now being employed as pump operators, cashiers, and customer service staff. However, their presence at petrol stations brings forth a new set of workplace challenges that need to be addressed. Working at a petrol station involves physical labor, shift duties, exposure to pollution, and dealing with a variety of customers. For women employees, these challenges are amplified due to societal expectations, personal responsibilities, and sometimes a lack of proper support infrastructure. In Dakshina Kannada and Udupi Districts, a growing urban area with several fuel stations, understanding these workplace issues is crucial for ensuring a safe and fair working environment for women. This study aims to assess the ground realities of women employed in this sector, analyze their experiences, and propose recommendations for improvement.

Objectives of the research

- ❖ To identify the Occupational Challenges encountered by women working at petrol stations in the study area.
- ❖ To assess the impact of workplace conditions on the physical and mental health of women employees, safety measures and policies implemented for the protection and to analyse the effects of long working hours and job responsibilities in the study area.
- ❖ To evaluate the role of management in supporting and promoting the welfare of women employees.
- ❖ To recommend strategies for improving workplace conditions for women at petrol stations.

Hypotheses for the Study:

1. H₀₁: There is no significant challenge faced by women employees working at petrol stations in the study area.
2. H₀₂: Workplace conditions at petrol stations do not significantly impact the physical and mental health of women employees.
3. H₀₃: Existing safety measures and policies at petrol stations are adequate for the protection of women employees.
4. H₀₄: Long working hours and job responsibilities do not significantly affect the personal lives of women employees.

5. H₀₅: Management does not play a significant role in supporting and promoting the welfare of women employees at petrol stations.

H₁₅: Management plays a significant role in supporting and promoting the welfare of women employees at petrol stations.

Statement of problem

Though the employment of women at petrol stations is increasing, these workplaces often lack essential facilities and support systems. Women face multiple challenges such as safety concerns during late-night shifts, absence of gender-sensitive infrastructure, work stress, and lack of proper training. Despite government guidelines, implementation at ground level remains weak. This study seeks to identify these gaps and understand the impact they have on women's physical and mental well-being.

Research methodology

- ❖ Research design: Descriptive and exploratory.
- ❖ Sample Size: 100 respondents (women employees at petrol stations).
- ❖ Sampling Technique: Purposive sampling.
- ❖ Data Collection: Primary data through a structured questionnaire (bilingual), and secondary data from websites, journals, and government policies.
- ❖ Data Analysis Tools: Tables, percentages, Ranks, Chi-Square Test as well as One Sample t-test and interpretation based on survey responses.
- ❖ Data Collection Method:

Survey (Questionnaire): A structured questionnaire will be designed, including closed-ended and open-ended questions. The questionnaire will be distributed to women employees across different petrol stations in Dakshina Kannada and Udupi to gather first-hand data on the challenges they face in their workplace.

Secondary Data: Secondary data was also referred to from academic literature, scholarly journals, research articles, and government reports, to support the findings.

Limitations of the study:

- ❖ The study is confined to Mangalore City Corporation and may not represent other regions.
- ❖ Only female employees were surveyed; managerial perspectives are not included.
- ❖ Data is based on self-reported responses, which may involve bias.

- ❖ Time constraints limited the number of petrol stations visited.

Literature review

- ❖ Women's participation in non-traditional sectors such as petrol stations has been gaining attention over the past few decades. According to Padma & Ravi (2018), women entering male-dominated industries face unique challenges including gender stereotyping, unequal workloads, and limited career advancement opportunities. Gupta (2017) emphasized that although such sectors provide employment opportunities, they often lack gender-sensitive policies, making retention difficult for women.
- ❖ The workplace environment significantly affects women's job satisfaction and their decision to continue in a particular field. Kaur & Arora (2019) highlighted that women in public service sectors, especially in physically demanding roles, frequently experience lack of rest areas, inadequate sanitation facilities, and minimal safety measures. Similarly, Patel (2020) found that women in petrol stations often report concerns about security, insufficient break times, and exposure to harsh working conditions, all of which contribute to physical and mental stress.
- ❖ Several studies have documented the adverse effects of physically demanding jobs on women's health. Sharma & Mehta (2016) noted that women employees in service sectors suffer from chronic exhaustion, muscle pain, and work-induced stress. Verma et al. (2021) further confirmed that irregular work schedules, long hours, and lack of emotional support in the workplace lead to emotional exhaustion and a decline in mental well-being. These factors negatively influence job satisfaction and overall life satisfaction.
- ❖ Achieving a satisfactory work-life balance remains a persistent challenge for working women, particularly in shift-based jobs like those at petrol stations. Rani & Sundari (2015) stressed that women in such sectors often compromise family time and social engagements, which can result in strained personal relationships. Thomas (2019) concluded that effective work-life balance policies and flexible schedules are essential for improving women's workplace experiences and reducing turnover rates.
- ❖ Management support plays a pivotal role in shaping a positive work environment for women. Jha & Singh (2017) found that when management actively supports female employees through fair policies, equal opportunities, and grievance redressal mechanisms, it enhances job satisfaction and workplace engagement. Kumari (2018) suggested that transparent

communication, accessible leadership, and welfare programs are critical for creating a supportive and inclusive workplace for women.

- ❖ Job satisfaction among women employees in male-dominated sectors is influenced by multiple factors, including working conditions, social acceptance, remuneration, and growth prospects. Das & Sarkar (2020) reported that women in petrol stations showed lower levels of job satisfaction compared to those in other service sectors, primarily due to inadequate recognition and limited promotional pathways. However, when women felt their work was valued and they were given opportunities to grow, retention rates improved significantly.
- ❖ Safety remains a key concern for women working in isolated or night-shift petrol stations. Bhatia (2021) emphasized the need for better infrastructure such as proper lighting, security arrangements, and accessible restrooms to encourage female participation in such workplaces. Without these basic facilities, women are more likely to feel vulnerable and dissatisfied.
- ❖ Societal perceptions regarding women working at petrol stations can also influence their workplace experience. Kumari & Patel (2016) found that women in non-traditional roles often face societal judgment and skepticism, which can affect their confidence and motivation. Combating these stereotypes requires organizational support as well as broader societal change.

Data analysis and interpretation

Social-Demographic Characteristics

1. The study indicates that the majority of women employees working at petrol stations are aged between 31 and 40 years. This could suggest that women in this age group are more engaged in or dependent on this type of employment, possibly due to financial responsibilities or family commitments. Additionally, the significant proportion of women above 40 years suggests that this sector employs women across a wide age range, including mid-career and older individuals, perhaps due to flexible or immediate employment opportunities. The lower percentage of younger employees (below 20 years) might reflect either lower entry rates at a young age due to educational pursuits or a lack of attraction to this type of job among younger women.

Overall, this diverse age distribution suggests the need for age-sensitive workplace policies and support systems that cater to the distinct needs of different age groups in the workforce.

2. The majority of women employees at petrol stations are married (62%), suggesting that many women are taking up this employment either to support their family income or due to economic necessity. The presence of 27% single women indicates that younger or unmarried women are also engaging in this sector, possibly to gain financial independence or work experience. The 11% widowed/separated category is notable as it highlights that petrol station employment may serve as an accessible source of livelihood for women who might have limited family or financial support.

Overall, this marital status distribution suggests that petrol stations employ women from various life situations and that family responsibilities and marital status may influence work patterns, stress levels, and job satisfaction. It also emphasizes the importance of supportive workplace policies for married women and single mothers, including flexible hours and safety measures.

3. The study clearly indicates that petrol stations predominantly employ women with lower educational qualifications. This suggests that the sector provides job opportunities for women who may have limited access to higher education or skilled jobs. The high representation of women below SSLC (43%) shows that these jobs may serve as an important source of livelihood for less-educated women, possibly because such jobs do not have high educational entry barriers. The low percentage of graduates (5%) indicates that more educated women may prefer other employment options that offer higher pay, career growth, or better working conditions.
4. The study indicates that most women employees at petrol stations are engaged in long working hours. With 98% of the respondents working 8 hours or more per day, it highlights the physically and mentally demanding nature of their job. The fact that 31% work more than 10 hours per day raises serious concerns regarding work-life balance, physical strain, fatigue, and potential health risks. Extended working hours could also limit their time for family, rest, and social activities, particularly affecting married women and mothers. The negligibly small percentage (2%) working less than 8 hours suggests that part-time or short-shift opportunities are rarely available for women in this sector.

Section B: Workplace Challenges

The most critical challenge perceived by women employees is discomfort while handling male customers with mean of 4.09 and SD of 0.99). Unequal pay is ranked second (with mean of 3.77

and SD of 1.18), highlighting a major concern about wage fairness. Gender discrimination (with mean of 3.68 and SD of 1.20) and inadequate restroom facilities (with mean of 3.67 and SD of 1.21) follow closely. While harassment (with mean of 3.54 and SD of 1.21) is still a significant issue, it ranks comparatively lower than the other challenges in this dataset.

Table 2

Chi-Square test results for each workplace challenge

Workplace Challenges	Chi-Square Statistic	Chi-Square p-Value	Interpretation
Harassment or inappropriate behavior	10.94	0.0273	Significant
Gender discrimination	15.54	0.0037	Significant
Inadequate restroom facilities	15.72	0.0034	Significant
Discomfort handling male customers	38.79	0.000000077	H. Significant
Unequal pay compared to male counterparts	20.82	0.000343	Significant

Calculated Data

Chi-Square test validates that the observed distribution of responses significantly differs from an expected uniform (neutral) distribution. All p-values are less than 0.05, indicating statistically significant deviations from the null hypothesis (which assumes no dominant perception in the responses). Discomfort handling male customers (Chi-Square = 38.79, $p < 0.000001$) shows the strongest departure from neutrality, indicating this is a highly prevalent issue. Other challenges like harassment, gender discrimination, inadequate facilities, and unequal pay also show statistically significant concerns in the workplace.

The Chi-Square tests statistically confirm that the challenges perceived by women employees are not evenly distributed or random - there is a clear, statistically significant tendency toward agreement with the workplace challenges presented.

Impact on Physical and Mental Health

Frequent stress or anxiety (with mean of 3.33 and SD of 1.37) is the highest concern among the respondents. Physical health issues such as fatigue and body pain (with SD of 1.26) follow closely with a mean score of 3.31. Emotional exhaustion is moderately prevalent with a mean score of 2.81 (with SD of 1.40). Negative impact on mental well-being (with mean of 2.60 and SD of 1.44) shows some concern but is relatively less critical compared to the first two issues. Frequent illness or exhaustion (with mean of 2.37) is the least reported impact among the five challenges.

One Sample t-test

This test is conducted to assess whether the Workplace conditions at petrol stations do not significantly impact the physical and mental health of women employees.

H_{02} : Workplace conditions at petrol stations do not significantly impact the physical and mental health of women employees.

H_{12} : Workplace conditions at petrol stations significantly impact the physical and mental health of women employees.

Summary Table

Physical and Mental Health	t-value	p-value	Interpretation
My job has affected my physical health (fatigue, body pain)	2.46	0.0155	Result: $p < 0.05$ Significant
I experience frequent stress or anxiety due to my job.	2.41	0.0174	Result: $p < 0.05$ Significant
I feel emotionally drained after work	-1.36	0.1765	Result: $p > 0.05$ Not significant
I suffer from frequent illness or exhaustion because of my work	- 4.50	0.00001	Result: $p < 0.05$ Highly significant
My job has negatively impacted my mental well-being	- 2.78	0.0064	Result: $p < 0.05$ Significant

Calculated Data

The one-sample t-test results show that most items have p-values less than 0.05, indicating significant differences from the neutral point. Specifically: Significant negative impact is observed in areas related to physical health, stress, illness, and mental well-being. Emotional exhaustion shows no significant difference from the neutral point. Hence, the null hypothesis (H_{02}) is rejected. We accept the alternative hypothesis (H_{12}) that workplace conditions at petrol stations significantly impact the physical and mental health of women employees.

Safety Measures and Policies

Table 1

Mean Scores and Standard Deviations on Safety Measures and Policies and its rankings

Physical and Mental Health	Mean	SD	Ranks
Adequate safety measures are in place at my workplace	2.99	1.64	2
There is proper security provided at my petrol station	3.52	1.51	1
There is a mechanism to report complaints safely	2.82	1.55	4
Management ensures that women employees feel secure during late shifts	2.62	1.24	5
Emergency support is available if required	2.73	1.28	3

Calculated Data

One Sample t-test

This test is conducted to assess whether the mean perception scores significantly differ from the neutral point (3 on the scale).

Hypothesis:

Null Hypothesis (H_0): Existing safety measures and policies at petrol stations are adequate for the protection of women employees. (Mean = 3)

Alternative Hypothesis (H_1): Existing safety measures and policies at petrol stations are not adequate for the protection of women employees. (Mean \neq 3)

Summary Table

Safety Measure	Mean	t-value	p-value	Interpretation
Adequate safety measures	2.99	-0.061	0.000	No significant difference from neutral; perception is approximately neutral.
Proper security provided	3.52	3.44	0.000	Significantly above neutral; perceived as adequate.
Complaint mechanism safe	2.82	-1.16	0.000	Significantly below neutral; perceived as inadequate.
Safety during late shifts	2.62	-3.06	0.000	Significantly below neutral; perceived as highly inadequate.
Emergency support available	2.73	-2.11	0.000	Significantly below neutral; perceived as inadequate.

Calculated Data

The analysis exhibits that, proper security provision is significantly perceived as adequate by the employees, complaint mechanisms, emergency support as well as late shift safety are all significantly perceived as inadequate and the perception of general safety measures is approximately neutral.

The null hypothesis can be rejected for most items except the general adequacy of safety measures (where perception is neutral). This suggests that overall safety policies need improvement, especially in areas like complaint mechanisms, emergency preparedness, and security during late shifts.

Effect on Personal Life

Table 2

Mean Scores and Standard Deviations on Effect on Personal Life and its rankings

Effect on Personal Life	Mean	SD	Ranks
My working hours leave me with little time for my family	3.09	1.41	2
I am unable to manage household responsibilities because of my job	2.46	1.15	5
I miss out on social gatherings due to work commitments	3.07	1.41	3
I feel my job has created a gap in my personal relationships	2.85	1.41	4
I am satisfied with my work-life balance	2.76	1.57	1

Calculated Data

One-Sample t-Test

This test is conducted to test whether long working hours and job responsibilities significantly affect the personal lives of women employees.

Null Hypothesis (H_0): Long working hours and job responsibilities do not significantly affect the personal lives of women employees. (The mean response = 3, which represents Neutral.)

Alternative Hypothesis (H_1): Long working hours and job responsibilities significantly affect the personal lives of women employees. (The mean response \neq 3.)

To determine whether the combined perception of women employees regarding the impact of work on personal life is significantly different from neutral (score = 3).

Summary Table

Test	Mean	t-value	p-value	Interpretation
One-Sample t-Test	3.09	0.638	0.525	Result: $p = 0.525 > 0.05$ Not statistically significant

Calculated Data

There is no sufficient evidence to conclude that working hours significantly affect the personal lives of women employees in this case. The average response is close to the neutral value (3), which indicates that overall, employees are neither strongly agreeing nor strongly disagreeing that their personal life is affected by working hours.

Management Support

Table 3

Mean Scores and Standard Deviations on Management Support and its rankings

Management Support	Mean	SD	Ranks
Management listens to women employees' grievances seriously	3.33	1.25	5
Management encourages women employees to grow in their job	3.44	1.32	2
Management treats male and female employees equally	3.58	1.31	1
Management takes steps to promote women's welfare	3.36	1.42	3
Management is approachable and supportive	3.34	1.38	4

Calculated Data

One-Sample t-test Results for Management Support

This test is conducted to test whether the Management plays a significant role in supporting and promoting the welfare of women employees at petrol stations.

H_{0s} : Management does not play a significant role in supporting and promoting the welfare of women employees at petrol stations.

H_{1s} : Management plays a significant role in supporting and promoting the welfare of women employees at petrol stations.

Summary Table

Management Support	t-value	p-value	Interpretation
Management listens to women employees' grievances seriously	2.64	0.0096	Result: $p < 0.05$ Significant
Management encourages women employees to grow in their job	3.33	0.0012	Result: $p < 0.05$ Significant

Management treats male and female employees equally	4.43	0.00002	Result: $p < 0.05$ Highly Significant
Management takes steps to promote women's welfare	2.54	0.0128	Result: $p < 0.05$ Significant
Management is approachable and supportive	2.46	0.0155	Result: $p < 0.05$ Significant

Calculated Data

The one-sample t-test was conducted to assess whether management support towards women employees at petrol stations is significantly positive compared to the neutral benchmark. The results reveal that for all five dimensions of management support - including listening to grievances, encouraging growth, promoting gender equality, taking steps for women's welfare, and being approachable - the mean scores were significantly higher than the neutral value (t-values ranging from 2.46 to 4.43, all p-values < 0.05).

These findings provide sufficient statistical evidence to reject the null hypothesis (H_{0s}) and accept the alternative hypothesis (H_{1s}). It can therefore be concluded that management plays a significant role in supporting and promoting the welfare of women employees at petrol stations.

Overall Satisfaction

Table 4

Mean Scores and Standard Deviations on Overall Satisfaction and its rankings

Overall Satisfaction	Mean	SD	Ranks
I am satisfied with my current job	3.15	1.31	1
I would recommend women to work at petrol stations	3.14	1.46	2
I intend to continue working here	2.65	1.48	3

Calculated Data

Chi Square test Results for Overall Satisfaction

This test is conducted to test whether there is a statistically significant difference in the distribution of responses regarding the intention to continue working.

H_{0s} : There is no statistically significant difference in the distribution of responses regarding the intention to continue working.

H_{1s} : There is a statistically significant difference in the distribution of responses regarding the intention to continue working.

Summary Table

Overall Satisfaction	Chi-Square Value	p-value	Interpretation
Job satisfaction	4.90	0.298	Result: $p = 0.525 > 0.05$ Not statistically significant
Recommend women	7.50	0.112	Result: $p = 0.525 > 0.05$ Not statistically significant
Intention to Continue Working	15.70	0.003	Result: $p < 0.05$ Significant difference

Calculated Data

Since the p-value (0.003) is less than 0.05, we reject the null hypothesis. There is a statistically significant difference in the distribution of responses regarding the intention to continue working. This suggests that respondents have diverse and polarized opinions on whether they wish to continue their current job.

Suggested Improvements for Petrol Stations to Support Women Employees

To create a more supportive and inclusive working environment for women (flexible working hours, reduced shift hours or job-sharing arrangements can significantly help women manage both personal and professional responsibilities effectively.

Another critical improvement is upgrading the physical infrastructure (ensuring access to clean, safe, and well-maintained restrooms exclusively for women, work areas should be well-lit and secure and designated rest areas) should be provided to the employees.

Supportive management practices are also crucial in fostering a positive workplace culture (establishing a clear grievance redressal system, regularly meeting with women employees to address their concerns).

Regular health check-ups and training on handling emergencies are necessary to safeguard employee well-being.

Furthermore, career growth and development opportunities must be made available to women employees. This can improve job satisfaction and help retain talented female staff.

Ensuring equal pay and gender-sensitive policies is fundamental to creating a fair workplace. Transparent performance appraisal systems and strict enforcement of anti-harassment policies will help establish a sense of equality and security among women employees.

Arranging safe and reliable transport can address safety concerns and improve attendance and punctuality. Building peer support networks can also greatly benefit women employees.

Lastly, it is recommended that management conduct regular feedback sessions and employee satisfaction surveys.

Conclusion

The present study on workplace challenges faced by women employees at petrol stations has revealed significant insights into their professional experiences, physical and mental health impacts, work-life balance, management support, and overall job satisfaction. The findings indicate that while many women are able to manage household responsibilities effectively, they often struggle to balance long working hours with family time and social life, leading to moderate levels of personal strain and emotional exhaustion. The analysis also shows that workplace conditions at petrol stations do have a tangible impact on the physical and mental well-being of women employees. Many respondents reported experiencing job-related stress, fatigue, and emotional drainage, though the intensity of these experiences varied among individuals. Management support emerged as a crucial factor in shaping the work experience of women employees. While a reasonable proportion of respondents acknowledged management's support, there remains scope for improvement in areas such as grievance redressal, promotion of women's welfare, and encouragement of professional growth. Notably, perceptions regarding equal treatment between male and female employees were relatively positive, which is an encouraging sign for gender inclusivity at petrol stations. The overall satisfaction levels indicate that women have mixed feelings about their jobs. Although a segment of respondents expressed satisfaction and willingness to recommend similar employment to others, a considerable number showed reluctance to continue working in such settings, highlighting underlying concerns that need to be addressed.

In summary, the study underscores the necessity for petrol station management to adopt women-friendly policies, improve workplace facilities, offer flexible work schedules, and provide opportunities for career advancement. By doing so, petrol stations can not only improve employee satisfaction and retention but also create a more supportive and equitable working environment for women.

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