

The Impact of a Positive Work Environment on Employee Retention in the Wastewater Treatment Industry: A Qualitative Analysis Using NVivo

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ABSTRACT

This study investigates the Positive Work Environment on Employee Retention in the Wastewater Treatment Industry. It measured the current arena in terms of value congruence, and explored qualitative data from a survey of employees in selected industries in India. Here interviews with employees from eight organizations, analysed using NVivo. Results highlight that leadership support, team cohesion, and recognition are crucial to fostering a supportive culture. Findings provide actionable recommendations for industry stakeholders to improve employee retention through a strategic focus on workplace culture. This qualitative analysis will be helpful to practitioners, government, policymakers and researchers working in the wastewater treatment industry.

Introduction

The wastewater treatment industry is vital to public health and environmental sustainability. Wastewater treatment facilities manage the collection, treatment, and disposal of sewage and industrial effluents, playing a critical role in protecting ecosystems and human health (Kundu et al 2017, Naz et al 2020). Despite this essential function, the industry is plagued by workforce challenges that threaten its operational efficacy and long-term viability. High employee turnover rates, aging infrastructure, and a shortage of skilled workers are common issues that require urgent attention.

Employees in this sector often work under high-pressure conditions, dealing with hazardous materials, irregular schedules, and the demands of keeping critical systems operational. Such stressors not only affect individual employee performance but also lead to broader organizational inefficiencies. Retaining experienced staff is essential for maintaining operational continuity, ensuring compliance with environmental regulations, and supporting technological advancements in wastewater treatment processes.

A positive work environment is increasingly recognized as a significant determinant of employee retention (Alias et al 2019, Yusliza et al 2021). Beyond financial incentives, employees value workplace factors such as supportive leadership, team cohesion, and opportunities for growth. In the wastewater treatment industry, where physical and emotional demands are high, a positive work environment can mitigate job stress and foster a sense of belonging among employees (Wadhwa et al 2017, Bello et al 2023). Research in related industries suggests that employees who perceive their work environment as supportive are more likely to remain committed to their roles, perform at higher levels, and contribute positively to organizational culture. Muthuswamy (2023) used NVIVO to evaluate quantitative segment collected through a questionnaire using simple random sampling. 196 usable questionnaire responses were returned and were analysed using Smart PLS 3.3.9. The study revealed that HRM practices such as training and development, compensation and reward, and the absence of absenteeism are crucial for enhancing employee

retention and Organizational Economic Performance. Also confirmed by the study's findings is the mediating effect of employee retention. The study's findings are useful for strategists who want to use HR practices to enhance organizational and economic performance. Olubiyi et al., (2019) study results explained a field study of 18 employees, through open ended interviews and survey transcripts, analyzed thematically using Nvivo qualitative data analysis tool, identified five themes that influence job satisfaction and employee retention: Friendly workplace environment, Flexibility, Stability, Management Support, and Independence.

Problem Statement

Turnover among skilled personnel disrupts operations and increases costs for wastewater treatment organizations. The costs of turnover are multifaceted, encompassing not only the financial burden of recruiting and training new employees but also the loss of institutional knowledge and decreased team morale. While financial incentives and benefits are often cited as primary retention strategies, they do not address the holistic needs of employees. Existing research highlights the gap in understanding how non-monetary factors, such as workplace culture, impact retention in technical and operational fields. This study seeks to bridge this gap by exploring the relationship between a positive work environment and employee retention in the wastewater treatment sector.

Research Objective

The objective of this study is to examine the impact of a positive work environment on employee retention in the wastewater treatment industry. By leveraging qualitative interviews and NVivo-based thematic analysis, this research aims to uncover actionable insights that can guide organizational strategies for fostering supportive workplace cultures.

Research Questions

1. What defines a positive work environment in the wastewater treatment industry?
2. How does a positive work environment affect employees' retention decisions?
3. What strategies can organizations adopt to foster a positive work environment?

Industry Context and Challenges

The wastewater treatment industry faces unique challenges that exacerbate workforce retention issues. Unlike more conventional office-based roles, employees in this sector often encounter physically demanding work environments characterized by exposure to hazardous chemicals, long hours, and high-pressure operational demands (Jamaley et al 2015). Moreover, the perception of wastewater treatment as a less desirable field for employment contributes to a limited talent pool, making retention of skilled employees even more critical.

Organizational Culture and Retention

Organizational culture plays a pivotal role in shaping employee experiences and attitudes toward work. A culture that emphasizes mutual respect, recognition, and collaboration can significantly enhance employee satisfaction and loyalty (Ushakov et al 2021). In the wastewater treatment industry, fostering a positive organizational culture is not only beneficial for retention but also instrumental in ensuring the safety, efficiency, and sustainability of operations. Employees who feel supported and valued are more likely to remain engaged, contributing to organizational resilience and adaptability.

Research Significance

This study offers practical insights for industry leaders, HR practitioners, and policymakers by demonstrating the critical role of workplace culture in addressing retention challenges. By focusing on non-monetary factors such as leadership support and team cohesion, the research provides a comprehensive framework for developing retention strategies tailored to the unique needs of the wastewater treatment industry. Additionally, the study contributes to the broader theoretical discourse on employee engagement and organizational support, extending its relevance beyond the immediate industry context.

Practical Implications

Organizations operating in the wastewater treatment industry can benefit from this research by gaining actionable insights into the specific elements of a positive work environment that resonate most with employees. Practical recommendations derived from this study include leadership development programs, team-building initiatives, and structured recognition systems. These interventions can help organizations not only retain their workforce but also enhance overall employee engagement and performance.

Research Methodology

This qualitative study employs semi-structured interviews to collect data. NVivo facilitates thematic analysis, providing detailed insights into participants' experiences. Eight organizations were selected to ensure diversity in size, geography, and workforce composition. Participants included operational, technical, and administrative staff. Data was gathered through 8 semi-structured interviews focused on employee perceptions of workplace culture and retention. Ethical considerations, including confidentiality and informed consent, were upheld. Data Analysis was done using software NVivo 14.

Visualizing Retention Strategies

The treemap (figure below) organizes and prioritizes the key themes identified through NVivo analysis. It provides a visual representation of retention strategies grouped into broader categories:

Comprehensive Career Development Strategies

- ✓ Skill Development: Reflects the importance of equipping employees with new competencies to boost engagement.
- ✓ Growth Opportunities: Highlights career progression as a crucial retention factor.
- ✓ Mentorship Programs: Underlines the role of mentorship in fostering professional relationships and guidance.

Employee Appreciation and Recognition

- ✓ The central emphasis on Rewards and Recognition demonstrates its prominence in driving employee satisfaction. This finding aligns with the qualitative feedback that acknowledgment strengthens loyalty.

Work Flexibility and Lifestyle Balance

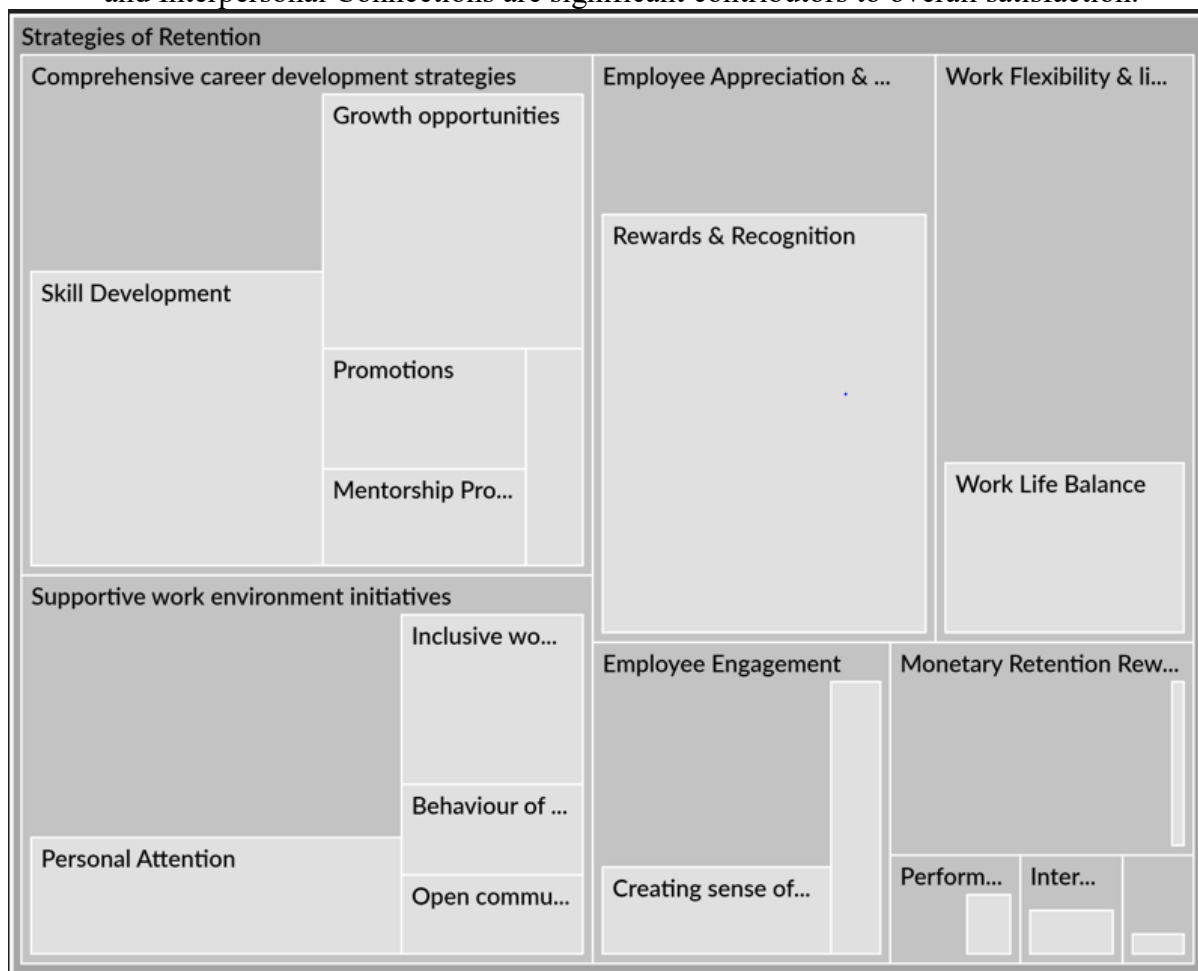
- ✓ Themes such as Work-Life Balance capture the growing employee demand for manageable workloads and flexible schedules, mitigating burnout.

Supportive Work Environment Initiatives

- ✓ Inclusive Workplace and Open Communication: Stress the importance of psychological safety and transparent dialogue.
- ✓ Behavior of Leaders: Leadership support emerged as a recurring theme in employee retention.

Employee Engagement and Monetary Retention Rewards

- ✓ While smaller in size, strategies like Creating Sense of Belonging, Performance Rewards, and Interpersonal Connections are significant contributors to overall satisfaction.



Source: NVIVO

By visually summarizing the results, the treemap underscores the multifaceted nature of retention strategies and their proportional impact. Each segment's size reflects the number of references coded under that theme, indicating its relative importance to employees.

Managerial implication

One managerial implication of this study is that Employee retention is a process where employees are inspired and encouraged to stay in the organization for a long time period (Ansari, 2017). As employee-organization value congruence has a significant effect on job satisfaction and employee turnover. As a result, organizational leaders can gain a better understanding of a Positive Work Environment on Employee Retention in the Wastewater Treatment Industry. It can benefit all type of organizations, level of management and be better informed in creating internal processes designed to increase job satisfaction and maximize employee retention. Clearly, a supportive [management style](#) could lead to positive engagements, but the measure of positive work environment strategies are highly subjective and derived from employee perceptions.

Limitation of the study

The qualitative approach limits generalizability. Additionally, reliance on NVivo for analysis necessitates cautious interpretation of patterns. Going forward, the future researchers can explore

mixed-methods approaches to validate findings and can also conduct longitudinal studies to assess the long-term impact of positive work environments on retention.

Conclusion

A positive work environment is a cornerstone of employee retention in the wastewater treatment industry. By focusing on leadership, team cohesion, and recognition, organizations can mitigate turnover and build a more engaged workforce. The study provides actionable insights for industry practitioners and lays the groundwork for future research in this critical area. In today's competitive world, where every organisation is trying to achieve maximum results and employees, especially the youth, are looking for opportunities to fill their needs, the retention of an individual in an organisation is not for long. Without employees, an organisation cannot function successfully. It's crucial to comprehend the many troubles that firms face in order to maintain staff and make use of solutions to them (Islam et al., 2024).

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