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## Labour Welfare Measures in Cement Companies of Andhra Pradesh: A Comparative Study

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### Abstract

This research investigates labour welfare measures in major cement companies operating in Andhra Pradesh, with a comparative focus on Ultratech Cement (Tadipatri), India Cements (Chilamkur), Bharathi Cement (Kadapa), and Cement Corporation of India (CCI). The study integrates statutory and non-statutory welfare initiatives to present a holistic understanding of employee well-being. Through quantitative analysis and employee feedback, the research highlights strengths in safety provisions, transport services, and work environment while also identifying gaps in advanced healthcare, leave policies, and retirement benefits. The findings serve as a guide for improving welfare frameworks to enhance employee satisfaction, retention, and organizational performance.

**Keywords:** Labour Welfare, Employee Satisfaction, Cement Industry, Industrial Relations, Statutory Welfare Measures, Occupational Safety, Work Environment, Productivity, Government Welfare Schemes, Employee Motivation.

### Introduction

Labour welfare refers to services, facilities, and amenities provided by employers to ensure the physical, mental, and social well-being of their workforce. In industries like cement manufacturing which involve strenuous work, exposure to dust, heat, and mechanical hazards employee welfare plays a critical role in maintaining productivity, reducing absenteeism, and enhancing morale. The cement industry in Andhra Pradesh, a significant contributor to infrastructure development, operates in geographically varied and often challenging environments. Welfare measures are not only mandated by laws such as the Employees' State Insurance Act, Payment of Gratuity Act, and Factories Act, but are also shaped by voluntary initiatives like housing schemes, transport, recreational facilities, and education support. The purpose of this study is to bring together both statutory and non-statutory welfare initiatives under a unified framework, "Comprehensive Employee Welfare Measures," as experienced by employees on the ground. The study also compares welfare performance across companies, identifying trends and gaps supported by statistical data.

## Literature Review

Labour welfare plays a pivotal role in shaping employee engagement, productivity, and industrial harmony, particularly in sectors like cement manufacturing where physically demanding and hazardous working conditions prevail. Existing studies in India highlight that welfare initiatives such as medical facilities, housing, transport, safety equipment, and educational support not only enhance workers' quality of life but also contribute significantly to organizational performance.

*The International Labour Organization (2019)* emphasizes that welfare and sound industrial relations are essential for ensuring decent work environments. It advocates for comprehensive welfare policies that address occupational health, safety, and social protection, thereby fostering sustainable economic development in industries reliant on manual labour.

*The Government of India's Annual Report (2022)* recognizes labour welfare and social security as core components of employee well-being. It underscores the challenges in implementing welfare programs across industries and calls for better communication and coordination between employers, government agencies, and workers to ensure that welfare schemes effectively reach all employees, including those in contractual roles.

*Ramesh and Suresh (2020)* point out that although welfare policies exist in the Indian cement industry, disparities in implementation remain a challenge. Their study highlights issues such as inconsistent provision of welfare services and lack of awareness among workers, especially in smaller plants where resources and monitoring are limited.

In a regional study, *Sharma (2018)* explores the labour welfare framework in public sector undertakings in Andhra Pradesh, identifying bureaucratic delays and insufficient outreach as key reasons for underutilization of welfare schemes. This study further suggests that welfare interventions should be aligned with grassroots needs to ensure practical benefits.

*The Ministry of Corporate Affairs (2021)* links corporate social responsibility initiatives to employee welfare, recommending stronger collaboration between government bodies and private enterprises. The report stresses that welfare provisions must go beyond statutory obligations and reflect an organization's commitment to holistic employee development.

*Gupta and Mishra (2017)* establish a direct connection between welfare services and employee satisfaction in cement plants. Their findings reveal that welfare measures like medical care, transport facilities, and housing significantly improve job satisfaction and reduce absenteeism, especially in remote industrial locations.

*The National Sample Survey Office (2019)* offers empirical evidence of uneven distribution of welfare benefits across sectors, revealing that workers in industrial settings often lack access to basic welfare schemes, thereby underscoring the need for targeted interventions.

*Venkatesh (2021)* highlights the crucial role of welfare officers in bridging the gap between policy and practice. He argues that welfare officers should be trained, empowered, and made accountable to effectively administer welfare programs and address workers' grievances.

*Iyer (2016)* brings attention to the gendered nature of welfare access, revealing that women workers are frequently marginalized and excluded from welfare programs. The study calls for inclusive policies that ensure equal access to welfare facilities for all employees.

*The World Bank (2020)* recommends integrating welfare policies with broader socio-economic development strategies. Its report asserts that improving worker well-being through effective welfare measures is key to fostering industrial peace and economic resilience in emerging economies.

*Tripathi (2019)* employs case study methods to show how welfare schemes directly impact employee performance and morale. Transparent and accessible welfare facilities are found to boost motivation, improve retention rates, and enhance organizational trust.

The *Andhra Pradesh Labour Welfare Board (2022)* report reviews state-level initiatives and stresses the importance of localized welfare strategies. It identifies significant implementation gaps, particularly in geographically dispersed industrial clusters.

*Bhatnagar (2018)* provides empirical evidence that welfare programs encourage employee engagement and improve productivity. The study suggests that employees are more likely to commit to organizational goals when welfare provisions are transparent and dependable.

*Mehta (2021)* examines welfare measures in India's unorganized sector and points out that informal workers are often left out of welfare schemes. The study argues for comprehensive legal frameworks to ensure universal welfare coverage, especially in industries with high contract labour participation.

*Karthik and Rao (2020)* focus on occupational health and safety in cement plants, recommending increased investment in protective gear, health monitoring, and hazard prevention. Their research shows that health-related welfare measures significantly reduce workplace injuries and absenteeism.

*Manasa, Krishna Naik, and C.N. (2016)* explore labour welfare and social security in cement units in Andhra Pradesh and Telangana. Their findings demonstrate that welfare programs enhance job security and employee morale, particularly in sectors where work-related risks are high.

*Vinathi and Suneetha (2025)* examine employees' perceptions of welfare measures in Bharathi Cement, Kadapa. Their research reveals that welfare services such as housing, transport, and medical facilities are key drivers of employee satisfaction and trust toward management.

The body of research consistently confirms that welfare measures are indispensable for improving industrial relations and boosting productivity in labour-intensive sectors like cement manufacturing. However, implementation gaps, awareness issues, and exclusion of marginalized groups — especially women and contract workers — remain significant challenges. Effective welfare strategies require collaborative efforts between government agencies, employers, and employees, supported by trained welfare officers and transparent communication mechanisms. Addressing these gaps will not only enhance workers' well-being but also contribute to the sustainable growth of the industry.

## Objectives

The specific objectives of this research are:

1. To analyze the implementation of employee welfare initiatives in selected cement companies.
2. To assess employee satisfaction across different welfare components, such as health, Safety, Housing, Education and Social Security.
3. To perform a comparative analysis using quantitative indices to determine relative welfare performance.
4. To perform a comparative analysis using quantitative indices to determine relative welfare performance.
5. To identify gaps and propose recommendations for improving welfare measures that align with employee expectations and legal frameworks.

## Methodology

- Research Design: A descriptive study based on employee surveys and company data reports.
- Companies Studied: Ultratech Cement (Tadipatri), India Cements (Chilamkur), Bharathi Cement (Kadapa), Cement Corporation of India (CCI).
- Sampling: 444 employees participated across companies. At least 100 respondents per major unit were included, with 120 employees surveyed in detail at Bharathi Cement.
- Data Collection: Structured questionnaires covering health, safety, facilities, education support, and satisfaction levels were distributed. Secondary data from company reports.
- Data Analysis: Percentages, mean values, standard deviation, coefficient of variation (CV%), and welfare indices were computed to derive comparative results.

## Case Study: Demographic Profiles of Employees in Cement Companies of Andhra Pradesh, India.

The effective implementation of labour welfare measures in industrial settings depends not only on the policies themselves but also on the socio-demographic characteristics of employees. Employees enter organizations with their personal attributes, beliefs, family structures, and socio-economic backgrounds, which influence their perceptions, attitudes, and responses to welfare initiatives. Understanding the demographic profiles of employees in the cement sector of Andhra Pradesh provides critical insight into how welfare programs are received and highlights areas requiring targeted intervention.

This case study explores the demographic attributes of employees working in three prominent cement companies K.C.P Cement, Ultra Tech Cement, and Zuari Cement. The analysis examines variables such as gender, age, marital status, educational qualifications, income sources, computer literacy, and participation in social and political activities. These findings contribute to understanding how employees' backgrounds influence their interaction with welfare initiatives, ultimately guiding company policies for enhanced support and productivity.

### Gender Distribution

	K.C.P Cement	Ultra Tech Cement	Zuari Cement
<b>Male</b>	90%	83.33%	82%
<b>Female</b>	10%	16.67%	18%

The majority of employees are male, with K.C.P Cement having the highest percentage at 90%. The presence of female employees is modest but consistent across the three units. These results highlight potential challenges in gender diversity and the need for policies aimed at increasing female representation and workplace inclusion.

### Age Distribution

	K.C.P Cement	Ultra Tech Cement	Zuari Cement
<b>Below 25</b>	18%	10%	16%
<b>26–35</b>	30%	28%	32%
<b>36–45</b>	34%	42%	36%
<b>Above 46</b>	18%	20%	16%

Employees in the 36–45 age group dominate the workforce, reflecting a workforce that is experienced yet still actively contributing. Their responsibilities extend beyond work, encompassing family care and children’s education. Welfare measures must therefore consider these life-stage challenges.

### Marital Status

	K.C.P Cement	Ultra Tech Cement	Zuari Cement
<b>Unmarried</b>	20%	24%	30%

A significant majority of employees are married, underscoring the importance of family-centered welfare policies. Marital responsibilities influence the need for healthcare, housing, and education-related support systems.

### Other Sources of Income

	K.C.P Cement	Ultra Tech Cement	Zuari Cement
<b>None</b>	60%	50%	70%
<b>Agriculture</b>	24%	30%	20%
<b>House Rent</b>	16%	20%	10%

Most employees rely solely on their salaries. A minority supplements their income through agriculture or rental properties. Financial welfare initiatives must therefore prioritize salary adequacy and support schemes.

### Educational Qualification

	K.C.P Cement	Ultra Tech Cement	Zuari Cement
<b>Below 10th</b>	14.67%	23.33%	20%
<b>Intermediate</b>	30%	33.33%	33.34%
<b>Graduate</b>	50%	40%	46.66%
<b>Postgraduate</b>	5.33%	3.34%	0%

The majority of employees are graduates, particularly at K.C.P Cement. Educational levels are moderate but sufficient to engage with welfare initiatives that require basic understanding and participation.

### Nature of Children’s Education

	K.C.P Cement	Ultra Tech Cement	Zuari Cement
<b>Private School</b>	30%	40%	46%
<b>Public School</b>	40%	36%	32%
<b>Government School</b>	30%	24%	22%

A growing preference for private schooling is observed, reflecting aspirations for quality education despite the availability of government schools.

### Medium of Education

	K.C.P Cement	Ultra Tech Cement	Zuari Cement
<b>English</b>	70%	72%	44%
<b>Telugu</b>	24%	28%	36%
<b>Urdu</b>	6%	0%	20%

English is the dominant medium across all units, although Telugu and Urdu are still relevant in certain locations. Welfare programs should consider language diversity for effective communication.

### Computer Literacy

	K.C.P Cement	Ultra Tech Cement	Zuari Cement
<b>Illiterate</b>	20%	28%	36%
<b>Basic Knowledge</b>	50%	54%	48%
<b>Aware</b>	30%	18%	16%

A majority of employees possess basic computer knowledge, but significant portions remain illiterate or only vaguely aware. Training programs should be incorporated into welfare measures to bridge this gap.

### Membership in Trade Unions

	K.C.P Cement	Ultra Tech Cement	Zuari Cement
<b>Non-Member</b>	8%	14%	12%
<b>Passive</b>	62%	70%	52%
<b>Active</b>	20%	16%	28%
<b>Office Bearer</b>	10%	0%	8%

The majority of employees remain passive members, indicating a lack of engagement or confidence in union activities. Awareness programs could help improve participation.

### Involvement in Politics

	K.C.P Cement	Ultra Tech Cement	Zuari Cement
<b>No Involvement</b>	16.67%	12%	14%
<b>Active</b>	73.33%	76.67%	72%
<b>Informal</b>	10%	11.33%	14%

A large portion of employees actively participate in politics, suggesting they are socially aware and invested in community and national affairs.

### Involvement in Religious Activities

	K.C.P Cement	Ultra Tech Cement	Zuari Cement
<b>No Involvement</b>	20%	28%	36%
<b>Active</b>	50%	54%	48%
<b>Passive</b>	30%	18%	16%

A majority of employees actively engage in religious activities, reflecting strong cultural ties and community participation.

This case study reveals that employees in Andhra Pradesh's cement industry represent a workforce that is predominantly male, middle-aged, and married, with educational qualifications ranging from intermediate to graduation. Financial stability is moderate, with limited income sources beyond employment. English medium education is preferred for their children, while computer literacy is still a challenge requiring targeted intervention. Although political and religious engagements are high, trade union membership is largely passive. For labour welfare programs to be truly effective, they must address educational gaps, provide family-centric policies, encourage social participation, and offer tailored interventions to meet the specific needs arising from employees' demographic characteristics.

## Comprehensive Employee Welfare Measures

This section presents a unified perspective by combining statutory provisions (such as medical benefits, insurance, safety measures) with voluntary initiatives (such as transport, canteen services, and recreational activities) into an integrated framework reflecting employees' lived experience.

### Occupational Health and Safety

Cement manufacturing involves risks such as exposure to dust, machinery injuries, and heat-related hazards. Safety equipment and medical facilities are therefore crucial.

- Safety Gear: A majority of employees (88%) reported consistent access to safety footwear, while 94% confirmed provision of gloves. Such equipment is essential for preventing injuries during handling of raw materials or operating machines.
- First Aid and Medical Facilities: 86% of respondents expressed satisfaction with first aid arrangements, but only 58% reported access to routine medical check-ups. Advanced health care like specialist consultations or emergency procedures—remains inadequate, especially in units such as CCI.
- Ambulance Availability: While 62% confirmed the presence of ambulance services, some units struggled to ensure 24-hour emergency access, affecting employee confidence during health crises.

Implications: Safety gear availability is robust across companies, but long-term health monitoring and advanced medical care need strengthening, particularly for chronic exposure-related ailments.

### Working Conditions and Facilities

Comfortable working conditions enhance morale and reduce fatigue.

- Work Environment: 87.5% of employees at Bharathi Cement expressed high satisfaction with the work environment, citing clean floors, well-maintained equipment, and structured workflows.
  - Ventilation and Lighting: Adequate air circulation and lighting are critical for health and productivity. 78% reported satisfactory ventilation, while 82% confirmed proper lighting throughout factory premises.
  - Cleanliness and Work Hours: Clean working spaces were acknowledged by 75% of employees. Additionally, 83% appreciated well-managed working hours, and 67% were satisfied with shift timings helping employees balance work and personal life.
- Implications: Physical conditions in the factories are well-managed, although improvements can still be made in shift rotations and fatigue management.

## Welfare Provisions beyond Statutory Mandates

These provisions reflect the organization's commitment to employee satisfaction beyond legal requirements.

- Canteen Services: 65% of employees were satisfied with the quality of food and services in factory canteens. Certain units reported higher satisfaction rates (up to 75%), often linked to regular audits and menu improvements.

- Transport Facilities: Transport is a major welfare factor for workers commuting from remote areas. At Bharathi Cement, 65% of employees were highly satisfied, while other units reported satisfaction between 60% and 83%.

- Uniform and Housing: Uniform provision is very high (94%), ensuring workplace safety and identity. Housing facilities and recreational centers also received positive feedback, with up to 89% satisfaction in some units.

Implications: Welfare programs aimed at daily convenience, such as canteen services and transport, significantly influence employee morale and should be prioritized alongside medical and safety initiatives.

## Social Security and Benefits

Social security measures are vital for employees' long-term welfare, especially in sectors prone to occupational hazards.

Education Support: Children's education schemes through scholarships and educational allowances satisfied 73% of respondents, underlining the role of welfare in breaking cycles of poverty.

- Retirement, Gratuity, and Leave: Satisfaction was inconsistent. Only 46% of CCI employees expressed approval of retirement benefits. At Bharathi Cement, leave policy satisfaction was very low, with only 4.17% highly satisfied and 25% dissatisfied, indicating areas requiring policy intervention.

- Insurance and Maternity Benefits: Employee State Insurance and maternity provisions are generally implemented but often lack awareness or proper execution, particularly among contractual or temporary workers.

Implications: Long-term welfare measures require structural reforms and clearer communication channels to ensure equitable distribution of benefits.

## Statistical Outcomes and Comparative Results

### Company-wise Welfare Index

A comparative analysis of welfare provisions across companies using Welfare Index, Safety Index, and Overall Welfare Index revealed the following:

Labour Welfare Indices and Employee Satisfaction at Bharathi Cement.

### Company-wise Welfare Indices

Company	Welfare Index	Safety Index	Overall Welfare Index	Consistency (CV %)	Rank
Penna (PCIL)	1.7143	3.5455	2.6299	0.0 / 0.0 / 0.0	1
Ultratech (UCL)	1.3175	3.9040	2.6108	4.64 / 0.55 / 1.04	2
India Cements	1.2273	3.9587	2.5930	5.86 / 1.97 / 1.52	3
CCI	1.3083	3.4306	2.3694	11.08 / 13.62 / 12.92	4

Interpretation: Penna Cement demonstrated the highest level of welfare implementation with consistent satisfaction among employees. Ultratech and India Cements followed closely, while CCI exhibited lower welfare provision and significant inconsistencies.

### Employee Satisfaction at Bharathi Cement

Measure	Highly Satisfied (%)	Satisfied (%)	Neutral (%)	Dissatisfied (%)	Total Satisfied (HS+S)
Work Environment	87.5	—	12.5	—	87.5
Medical Facilities	16.67	24.17	59.17	4.17	40.84
Transport Facilities	65.00	20.00	14.17	0.83	85.00
Leave Policy	4.17	12.50	58.33	25.00	16.67
Overall Welfare	81.67	10.00	6.67	1.67	91.67

Interpretation: Work environment, transport, and overall welfare scored high, while leave policies and medical facilities reflected dissatisfaction and areas needing urgent intervention

### Discussion

The analysis shows that most welfare measures are effectively implemented in areas related to basic safety, work environment, and transport. Employees report satisfaction with physical comforts such as proper ventilation, lighting, and canteen services. However, welfare programs like advanced healthcare, leave entitlements, and retirement benefits suffer from inadequate communication, inconsistent implementation, and policy gaps, especially for contractual workers. The study's statistical findings suggest that welfare performance varies across companies, with public sector units like CCI lagging behind private players like Ultratech and India Cements. This may be attributed to bureaucratic delays, lack of resource allocation, and weaker monitoring mechanisms.

Labour welfare is an integral part of industrial development and social stability. The study explored how welfare provisions impact workers in selected cement companies in Andhra Pradesh. It examined employee demographics, awareness, satisfaction levels, and the overall effect of welfare measures on productivity, motivation, and industrial relations.

### Summary of Statistical Results

#### Demographic Characteristics

**Gender:** 90% men in K.C.P Cement, 83% in Ultra Tech, and 82% in Zuari Cement.

**Marital Status:** 80% married in K.C.P, 76% in Ultra Tech, 70% in Zuari Cement.

**Other Sources of Income:** 60% in K.C.P, 50% in Ultra Tech, and 70% in Zuari have no other income apart from their job.

**Educational:** 50% graduates in K.C.P, 40% in Ultra Tech, 46.6% in Zuari.

**Children's Schooling:** 40% children in public schools in K.C.P, 40% in private schools in Ultra Tech, 46% in private schools in Zuari.

**Medium of Education:** 70% children in English medium in K.C.P, 72% in Ultra Tech, 44% in Zuari.

**Computer Literacy:** 50% basic knowledge in K.C.P, 54% in Ultra Tech, 48% in Zuari.

**Trade Union Membership:** 62% passive in K.C.P, 70% passive in Ultra Tech, 52% passive in Zuari.

**Political Participation:** 73% active in K.C.P, 76% in Ultra Tech, 72% in Zuari.

**Religious Activities:** 50% active in K.C.P, 54% in Ultra Tech, 48% in Zuari.

#### Job Satisfaction and Work Environment

**Job Requirement Practices:** 30% rated 'very good' in K.C.P, majority rated 'good' in Ultra Tech, 27% rated 'poor' in Zuari.

**Job Attachment:** 30% 'good' in K.C.P, 26.67% 'very good' in Ultra Tech, 30% 'poor' in Zuari.

**Job Information:** 50% 'very good' in K.C.P, 40% 'very good' in Ultra Tech, 40% 'good' in Zuari.

**Relationship with Staff:** 50% 'very good' in K.C.P, 36.67% 'very good' in Ultra Tech, 33.33% 'good' in Zuari.

**Communication:** 53.3% 'very good' in K.C.P, 30% in Ultra Tech, 36% 'good' in Zuari.

**Recognition:** 50% 'very good' in K.C.P, 33.33% in Ultra Tech, 40% 'good' in Zuari.

**Salary:** 46.67% 'very good' in K.C.P, 33.33% in Ultra Tech, 40% 'good' in Zuari.

**Reward Transparency:** 47% 'very good' in K.C.P, 36.67% in Ultra Tech, 36.67% in Zuari.

**Working Conditions:** 60% 'very good' in K.C.P, 53.33% in Ultra Tech, 33.33% 'excellent & good' in Zuari.

**Working Hours:** 53.33% 'very good' in K.C.P, 50% in Ultra Tech, 40% in Zuari.

**Safety Appliances:** 60% 'very good' in K.C.P, 50% in Ultra Tech, 46.67% in Zuari.

**Training Conditions and Promotion:** 56.67% 'very good' in K.C.P, 65% in Ultra Tech, 46.67% in Zuari.

**Temporary Staff:** 43.33% 'poor' in K.C.P, 50% 'excellent' in Ultra Tech, 40% 'very good' in Zuari.

**Authority at Work:** 43.33% 'poor' in K.C.P, 50% 'excellent' in Ultra Tech, 40% 'very good' in Zuari.

**Opportunity for Growth:** 50% 'very good' in K.C.P, 53.33% 'poor' in Ultra Tech, 36.67% 'excellent' in Zuari.

**Promotion & Education Relation:** 53.33% 'very good' in K.C.P, 50% in Ultra Tech, 43.33% in Zuari.

**Living Conditions & Finance:** 36.67% 'good' in K.C.P, 33.33% 'very good' in Ultra Tech, 30% 'very good' in Zuari.

**Family Relationship:** 36.67% 'very good' in K.C.P, 43.33% 'good' in Ultra Tech, 33.33% 'very good' in Zuari.

### **Impact of Welfare Measures on Work**

**Productivity Increase:** 40% strongly agree in K.C.P, 30% in Ultra Tech, 30% in Zuari.

**Growth of Business:** 36.67% agree in K.C.P, 30% in Ultra Tech, 30% in Zuari.

**Quality of Work Life:** 33.33% agree in K.C.P, 30% neutral in Ultra Tech, 26.67% strongly agree/disagree in Zuari.

**Motivation:** 60% strongly agree in K.C.P, 40% agree in Ultra Tech, 40% agree in Zuari.

**Absenteeism:** 70% strongly agree in K.C.P, 40% strongly agree in Ultra Tech, 53.33% strongly agree in Zuari.

**Organizational Climate:** 60% strongly agree in K.C.P, 40% agree in Ultra Tech, 50% strongly agree in Zuari.

**Turnover Reduction:** 50% strongly agree in K.C.P, 40% strongly agree in Ultra Tech and Zuari.

**Relationship Improvement:** 40% strongly agree/agree in K.C.P, 50% neutral in Ultra Tech, 30% agree in Zuari.

**Well-being:** 40% strongly agree in K.C.P, 40% neutral in Ultra Tech, 40% strongly agree in Zuari.

**Desire to Work:** 40% strongly agree in K.C.P, 40% neutral in Ultra Tech, 40% strongly agree in Zuari.

**Standard of Living:** 70% strongly agree in K.C.P, 40% agree/neutral in Ultra Tech, 50% strongly agree in Zuari.

**Commitment:** 70% agree in K.C.P, 50% agree in Ultra Tech, 50% agree in Zuari.

**Industrial Relations:** 43.33% agree in K.C.P, 36.67% strongly agree in Ultra Tech, 36.67% agree in Zuari.

**Work Methods Improvement:** 50% strongly agree in K.C.P, 33.33% strongly agree/agree in Ultra Tech, 40% strongly agree in Zuari.

Majority of respondents in K.C.P showed strong agreement on positive impacts, whereas Ultra Tech and Zuari showed more mixed or moderate agreement levels. The statistical results reveal several key insights into the labour welfare scenario in Andhra Pradesh's cement industry:

### 1. Demographic Trends

The workforce is predominantly male and married, reflecting socio-cultural norms and indicating that welfare programs must address family-related concerns like housing and education. A high reliance on a single income stream underscores workers' vulnerability, necessitating financial support and insurance schemes.

### 2. Awareness Gaps

Despite statutory provisions, employees lack awareness of available welfare benefits. Orientation programs and targeted awareness campaigns are needed to ensure that employees utilize welfare provisions effectively.

### 3. Gender-Specific Concerns

The dissatisfaction among women workers points to the need for gender-sensitive welfare policies that address maternity care, childcare, and workplace safety.

### 4. Impact on Productivity

The positive correlation between welfare provisions and workplace outcomes such as motivation, absenteeism reduction, and improved relationships validates the argument that welfare is not a luxury but a productivity enhancer.

### 5. Infrastructure Deficits

Welfare facilities such as temporary staffing during emergencies, recreational activities, and counseling are poorly implemented, which could undermine long-term employee engagement and morale.

### 6. Industrial Relations and Governance

The perception of welfare officers being aligned with management reflects governance issues, calling for reforms in accountability and monitoring mechanisms.

### 7. Need for Comprehensive Welfare Strategy

Statutory provisions are implemented better than non-statutory ones, but both require stronger institutional backing.

## Recommendations

### 1. Improve Medical and Health Services:

- Introduce periodic health check-ups and establish dedicated health centers with specialist access.
- Conduct awareness drives on preventive health measures and insurance benefits.

### 2. Revise Leave and Retirement Policies

- Standardize leave structures across units to ensure fairness and transparency.
- Improve communication regarding retirement plans and gratuity schemes to build trust.

### 3. Expand Benefits to Contractual Workers

- Extend insurance and health benefits to temporary and casual staff.
- Conduct workshops to educate employees about available welfare schemes.

### 4. Enhance Transport and Canteen Facilities

- Increase frequency and routes for transport services.
- Regular audits and employee feedback sessions to improve canteen quality.

### 5. Strengthen Monitoring and Feedback Systems

- Implement grievance redressal committees.
- Conduct periodic surveys to track employee satisfaction and adjust policies accordingly.

The cement industry in Andhra Pradesh has made significant strides in providing welfare measures that support the well-being of its employees. Safety gear, work environment, and transport facilities are strengths across the industry. However, gaps in advanced medical care, leave policies, retirement benefits, and social security remain prominent challenges. Addressing these issues through policy reform, better communication, and inclusive welfare initiatives will not only enhance employee satisfaction but also improve productivity and organizational stability.

## Conclusion

Labour welfare measures constitute an essential component of industrial development, employee well-being, and organizational sustainability, particularly in labour-intensive industries such as cement manufacturing. This comparative study of selected cement companies in Andhra Pradesh namely Ultratech Cement, India Cements, Bharathi Cement, Cement Corporation of India (CCI), K.C.P Cement, and Zuari Cement demonstrates that welfare initiatives significantly influence employee satisfaction, productivity, industrial relations, and organizational commitment.

The study reveals that statutory welfare measures such as safety equipment, medical assistance, insurance coverage, canteen facilities, sanitation, and regulated working hours are implemented reasonably well across most companies. Employees expressed considerable satisfaction regarding occupational safety provisions, transport facilities, work environment, and organizational support systems. Welfare measures

related to safety appliances, ventilation, lighting, uniforms, and transportation were particularly appreciated, reflecting management efforts to comply with legal standards and maintain healthy working conditions.

The demographic analysis further indicates that the workforce in Andhra Pradesh's cement industry is predominantly male, married, and middle-aged, with moderate educational qualifications and limited alternative income sources. These socio-economic characteristics emphasize the importance of family-oriented welfare measures such as healthcare, housing support, children's education assistance, and financial security programs. The increasing preference for private and English-medium education among employees' children also reflects rising aspirations and changing socio-economic expectations among industrial workers.

The comparative welfare indices reveal noticeable differences among companies. Penna Cement and Ultratech Cement demonstrated relatively higher welfare performance and consistency, while CCI exhibited lower satisfaction levels and greater inconsistency in welfare delivery. Bharathi Cement showed strong performance in work environment and transport facilities, although dissatisfaction regarding leave policies and advanced medical facilities remained significant. These variations suggest that private sector companies tend to implement welfare measures more effectively than public sector units due to better resource allocation, administrative flexibility, and stronger monitoring systems.

The study also identifies several critical gaps in welfare implementation. Advanced healthcare facilities, retirement benefits, leave policies, counseling services, and welfare support for contractual workers remain inadequate in many units. Awareness regarding welfare schemes and social security provisions is also limited, reducing the effective utilization of available benefits. Additionally, women employees continue to face challenges relating to inclusiveness, maternity support, and workplace sensitivity, indicating the need for gender-responsive welfare policies.

Statistical findings clearly establish a positive relationship between labour welfare measures and organizational outcomes such as increased productivity, reduced absenteeism, improved motivation, better industrial relations, stronger employee commitment, and enhanced quality of work life. Employees who perceived welfare facilities positively also demonstrated higher levels of job satisfaction and organizational attachment. This confirms that labour welfare should not be viewed merely as a statutory obligation but as a strategic investment contributing directly to industrial efficiency and long-term organizational growth.

The study therefore concludes that effective labour welfare policies require a comprehensive and integrated approach combining statutory compliance, voluntary welfare initiatives, employee participation, transparent communication, and continuous monitoring. Companies must strengthen healthcare infrastructure, improve social security awareness, extend welfare benefits to contract labourers, enhance grievance redressal systems, and introduce inclusive and employee-centric welfare frameworks. Government agencies, welfare boards, trade unions, and management should work collaboratively to ensure that welfare measures reach all categories of workers effectively.

In conclusion, labour welfare is not only a mechanism for improving workers' living and working conditions but also a vital instrument for achieving industrial peace, organizational productivity, and sustainable economic development. The cement industry in Andhra Pradesh has made meaningful progress in this direction; however, sustained efforts, policy reforms, and inclusive welfare practices are necessary to build a healthier, safer, and more equitable industrial environment for the future workforce.

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