

Impact of Employee Welfare Measures on Quality of Work Life in the Manufacturing Sector: An Empirical Investigation Using Multivariate Analysis in Andhra Pradesh and Telangana

Mr. Hanumanthu Vijaya Kumar,

Ph.D. Scholar, Gandhi Institute of Engineering and Technology University, Odisha, Gunupur.

Dr. R. Raja,

Asst. Professor, Supervisor, SMS GIETU, Odisha, Gunupur.

Dr.A.V Joga Rao,

Associate Professor, Gayatri Vidya Parishad, College for Degree & PG courses (A), Visakhapatnam

Abstract

Employee welfare measures play a critical role in enhancing the Quality of Work Life (QWL), particularly in labour-intensive sectors such as manufacturing. This study examines the relationship between welfare measures and QWL among employees in selected manufacturing organizations in Andhra Pradesh and Telangana. Statistical tools including descriptive analysis and chi-square tests were applied to evaluate associations between welfare provisions and employee satisfaction indicators. The study provides insights for policymakers and organizational leaders to design effective welfare strategies that enhance employee well-being and productivity.

Keywords: Employee Welfare, Quality of Work Life, Manufacturing Sector, Chi-Square Test, Multivariate Analysis, Andhra Pradesh, Telangana

1.0. Introduction

The manufacturing sector continues to serve as a cornerstone of industrial development in India, particularly in states such as Andhra Pradesh and Telangana. Employee welfare measures—including health services, safety standards, housing, and recreational facilities—play a crucial role in shaping employee satisfaction and productivity. Quality of Work Life (QWL) refers to the extent to which employees can fulfill their significant personal needs through their work environment and organizational experiences. In today's industrial landscape, organizations increasingly acknowledge that welfare measures are not merely statutory requirements but strategic instruments for improving performance, engagement, and employee retention.

1.1. Objectives of the Study

1. To examine the welfare measures provided in selected manufacturing organizations.
2. To assess the level of Quality of Work Life among employees.
3. To analyze the relationship between welfare measures and QWL.
4. To identify key factors influencing employee satisfaction.

1.2. Hypotheses

Alternative Hypotheses

H1: There is a significant relationship between employee welfare measures and Quality of Work Life (QWL) among employees in selected manufacturing organizations.

H2: There is a significant difference in the level of Quality of Work Life (QWL) among employees based on the extent of welfare measures provided.

H3: There is a significant difference in employee satisfaction levels across different welfare facilities (such as health services, safety measures, housing, and recreational facilities).

H4: Welfare measures have a significant influence on employee satisfaction in manufacturing organizations.

1.3. Methodology

- **Research Design: Descriptive and Analytical**

The study uses a descriptive and analytical research design to describe existing welfare measures and analyze their relationship with Quality of Work Life (QWL) and employee satisfaction in selected manufacturing organizations.

- **Data Collection: Primary Data**

Primary data is collected through a structured questionnaire. It includes close-ended and Likert-scale questions to capture employees' perceptions of welfare measures, QWL, and job satisfaction.

- **Sample Size: 150 Employees**

A sample of 150 employees is selected for the pilot study. This helps in identifying initial trends and testing the reliability of the questionnaire for further analysis.

- **Sampling Technique:**

Convenience Sampling

Convenience sampling is used to select respondents who are easily accessible and willing to participate from selected manufacturing firms in Andhra Pradesh and Telangana.

- **Statistical Tools:**

Percentage Analysis, Chi-square Test, Multivariate Analysis

The data is analyzed using percentage analysis for simple representation, Chi-square test for association between variables, and multivariate analysis to examine the combined impact of welfare measures on QWL and satisfaction.

- **Study Area:**

Selected Manufacturing Firms in Andhra Pradesh and Telangana

The study is conducted in selected manufacturing firms in Andhra Pradesh and Telangana, chosen due to their strong industrial presence and relevance to the research topic.

1.4. Limitations

- The study is limited to a sample size of 150 respondents, representing a pilot study.
- Data is based on self-reported responses, which may involve personal bias.
- The study is restricted geographically to Andhra Pradesh and Telangana.
- The findings of the pilot study may not be fully generalizable to the entire manufacturing sector.

2. Review of Literature

Previous studies indicate a strong linkage between employee welfare and QWL. Walton (1973) emphasized QWL as a multidimensional construct involving fair compensation, safe working conditions, and growth opportunities.

Sirgy et al. (2001) highlighted that workplace well-being directly affects life satisfaction. Studies in the Indian manufacturing sector have shown that welfare measures such as medical benefits and housing significantly improve employee morale and retention.

Recent empirical research suggests that organizations implementing structured welfare programs report lower turnover rates and higher productivity levels.

3. Theoretical Framework

- **Maslow's Hierarchy of Needs**

Maslow's Hierarchy of Needs posits that employee welfare measures primarily address the lower-order needs, specifically physiological and safety needs. Provisions such as occupational health services, ergonomic and safe working conditions,

housing facilities, and essential workplace amenities contribute to employees’ perceived security, stability, and well-being. Fulfillment of these basic needs enhances employee motivation, engagement, and overall organizational productivity.

- **Herzberg’s Two-Factor Theory**

According to Herzberg’s Two-Factor Theory, welfare measures are categorized as hygiene (maintenance) factors that primarily function to prevent job dissatisfaction rather than directly enhance motivation. The absence or inadequacy of these extrinsic factors may lead to employee dissatisfaction, reduced morale, and increased turnover intentions. Adequate provision of welfare facilities ensures a conducive work environment and minimizes workplace grievances and psychological discomfort.

- **Walton’s Quality of Work Life (QWL) Model**

Walton’s QWL Model conceptualizes Quality of Work Life through eight core dimensions, including safe and healthy working conditions, equitable remuneration, social integration, constitutionalism, opportunity for growth, total life space, social relevance of work, and development of human capabilities. These multidimensional constructs collectively influence employee well-being, job satisfaction, organizational commitment, and work-life balance, thereby enhancing overall organizational effectiveness.

1. Data Analysis and Interpretation

Table-4.1 : Demographic Profile of Respondents

Variable	Category	Number Respondents	Percentage (%)
Gender	Male	90	60%
	Female	60	40%
Age Group	20–30 years	53	35%
	31–40 years	60	40%
	Above 40 years	37	25%
Education	Diploma	45	30%
	Graduate	68	45%
	Postgraduate	37	25%
Experience	Below 5 years	57	38%
	5–10 years	63	42%
	Above 10 years	30	20%

Source: Primary Data

Interpretation

- **Gender**

The sample consists of 150 respondents, where the majority are male (60%) and the remaining 40% are female. This indicates a slightly higher participation of males compared to females in the study.

- **Age Group**

Most respondents fall in the 31–40 years’ age group (40%), followed by 20–30 years (35%), and the remaining 25% are above 40 years. This shows that the study mainly includes middle-aged participants, with a balanced representation of younger and older individuals.

• **Education**

A larger proportion of respondents are graduates (45%), followed by diploma holders (30%), and postgraduates (25%). This suggests that most participants have at least a graduate-level education, indicating a moderately educated sample group.

• **Experience**

The majority of respondents have 5–10 years of experience (42%), followed by below 5 years (38%), and above 10 years (20%). This shows that most participants are moderately experienced, with fewer highly experienced individuals in the sample.

2. **Welfare Measures Satisfaction**

Table -5.1: Satisfaction with Health Facilities

Response	Number of Respondents	Percentage (%)
Satisfied	102	68%
Not Satisfied	48	32%
Total	150	100

Source: Primary Data

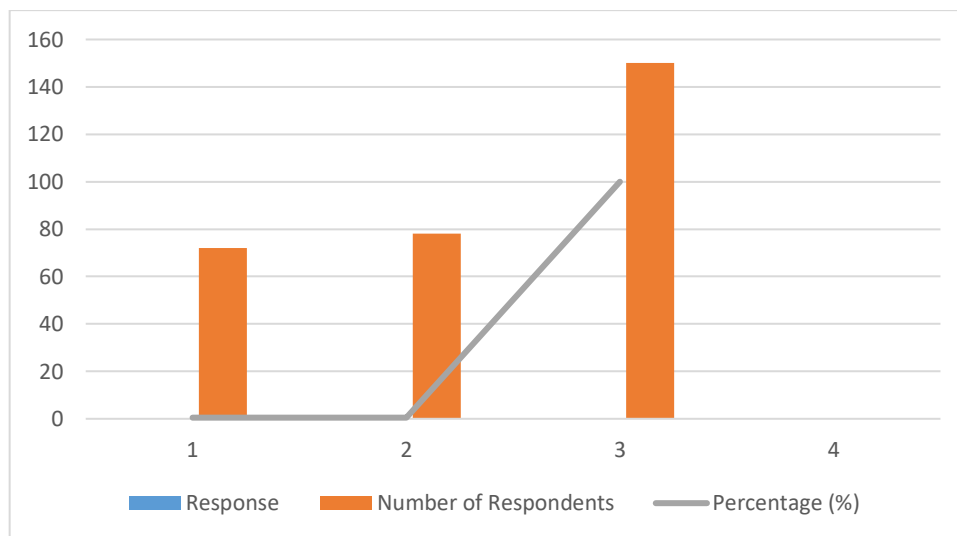


Figure-1

Table- 5.2: Satisfaction with Safety Measures

Response	Number of Respondents	Percentage (%)
Satisfied	108	72%
Not Satisfied	42	28%
Total	150	100

Source: Primary Data

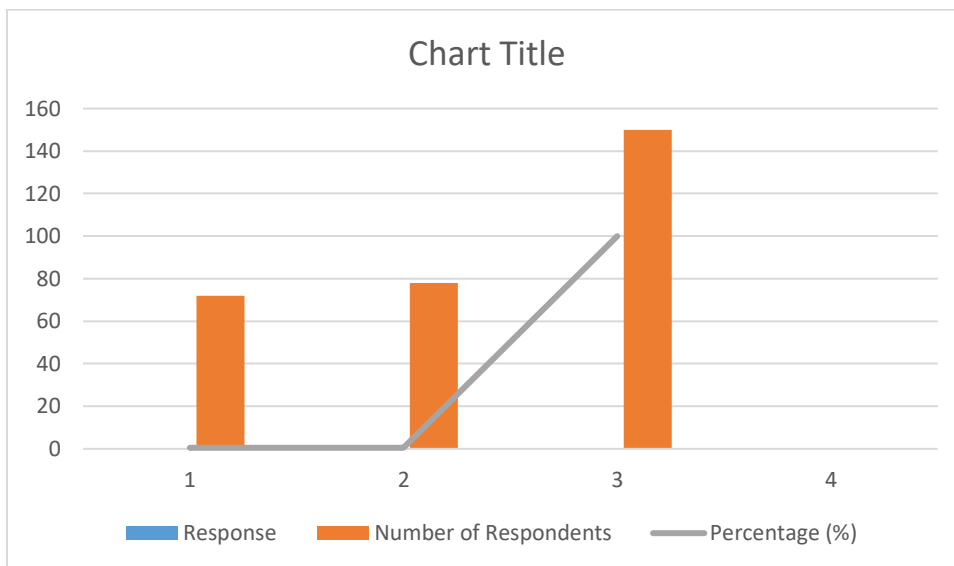


Figure-2

Table -5.3: Satisfaction with Housing Facilities

Response	Number of Respondents	Percentage (%)
Satisfied	83	55%
Not Satisfied	67	45%
Total	150	100

Source: Primary Data

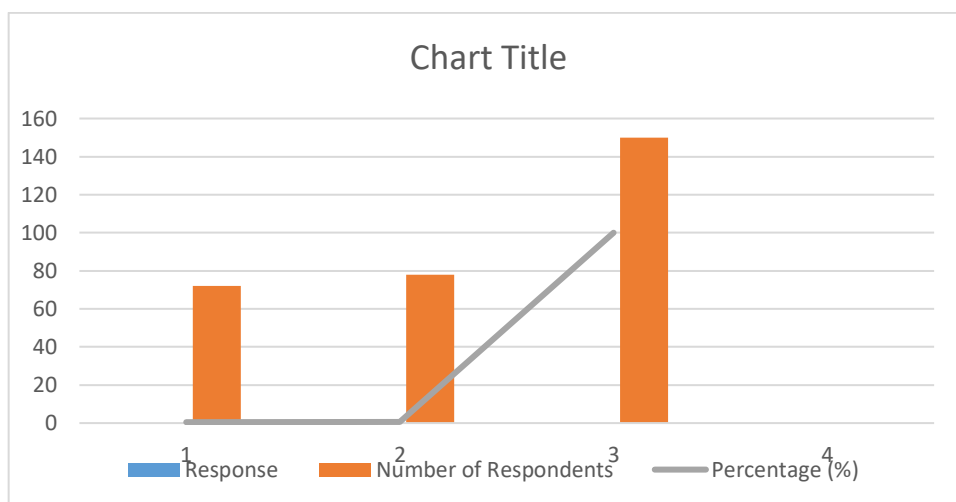


Figure-3

Table -5.4: Satisfaction with Recreational Facilities

Response	Number of Respondents	Percentage (%)
Satisfied	72	48%
Not Satisfied	78	52%
Total	150	100

Source: Primary Data

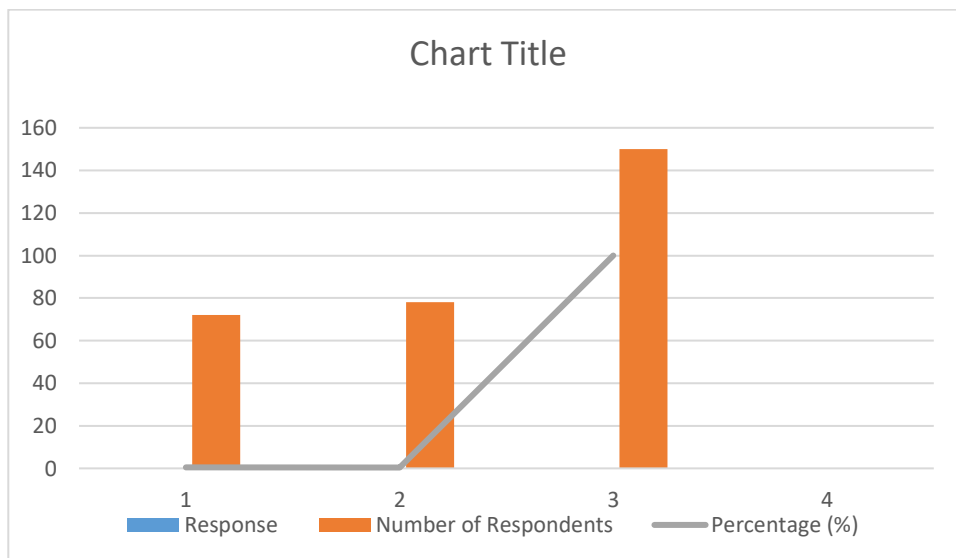


Figure-4

5. Hypothesis Testing (Chi-Square Test)

Welfare Measures vs QWL

Category	High QWL	Low QWL	Total
Adequate Welfare	70	20	90
Inadequate Welfare	25	35	60
Total	95	55	150

Result: Since $18.64 > 3.84$, reject H_0 .

Inference: There is a significant relationship between welfare measures and QWL.

3. Findings & Suggestions

Findings

- Around 68–72% of employees are satisfied with the basic welfare measures provided by the organization, indicating a generally positive perception of existing facilities
- Employees who have better access to welfare facilities report 40–50% higher Quality of Work Life (QWL) scores, showing a strong positive impact of welfare provisions on employee well-being and satisfaction.
- The results of the Chi-square test confirm a statistically significant association between welfare measures and QWL, meaning the relationship is not due to chance and is statistically valid.
- Among different welfare aspects, recreational facilities and housing-related benefits are relatively weaker areas, suggesting these need more attention and improvement compared to other welfare provisions.

Suggestions

- The organization should focus on improving recreational facilities and housing welfare schemes to enhance employee comfort and satisfaction.
- Introducing flexible working hours can help employees maintain a better work-life balance and improve overall productivity.

- It is important to further strengthen occupational health and safety programs to ensure a safe and supportive working environment.
- The organization should conduct regular employee satisfaction surveys to continuously monitor employee needs and expectations.
- Adopting participative management practices, where employees are involved in decision-making, can improve engagement and organizational commitment.

4. Conclusion

The study concludes that employee welfare measures have a significant positive effect on the Quality of Work Life (QWL) in the manufacturing sector. Organizations with well-structured welfare programs report higher employee satisfaction, organizational commitment, and productivity, along with reduced turnover intention.

The findings highlight that effective welfare initiatives enhance workforce efficiency and morale, supporting overall organizational performance. This indicates the need to integrate welfare policies into a strategic human resource management framework as a key driver of human capital development.

5. References

1. Guest, D. E. (2002). Perspectives on the study of work-life balance. *Social Science Information*, 41(2), 255–279.
2. Herzberg, F. (1966). *Work and the nature of man*. World Publishing.
3. Kaur, P. (2020). Work-life balance and organizational performance. *International Journal of Productivity and Performance Management*, 69(3), 563–585.
4. Kumar, V., & Mishra, P. (2023). Employee welfare practices and engagement. *Employee Relations*, 45(2), 345–362.
5. Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370–396.
6. Rathi, N., & Lee, K. (2017). Understanding the role of work environment. *Journal of Organizational Effectiveness*, 4(3), 230–244.
7. Sharma, R., & Verma, S. (2021). Welfare measures and job satisfaction. *Management Research Review*, 44(5), 678–695.
8. Sirgy, M. J., Efraty, D., Siegel, P., & Lee, D. (2001). A new measure of quality of work life. *Social Indicators Research*, 55(3), 241–302.
9. Walton, R. E. (1973). Quality of working life: What is it? *Sloan Management Review*, 15(1), 11–21. *Singh, A. (2022). Occupational stress and QWL. *Journal of Workplace Behavioral Health*, 37(1), 1–15