

The Effect of Development Programs on Employees Satisfaction in Andhra Pradesh Manufacturing Industries

E. Hari Prasad¹, Prof P. Raghunadha Reddy²

¹Research Scholar Dept of Management Studies Sri Venkateswara University College of Commerce,
Management and & Computer science Sri Venkateswara University, Tirupati
Andhra pradesh - 517502

²Professor, Dept of Management Studies SVUCCM&CS, Sri Venkateswara University, Tirupati
Andhra pradesh - 517502

Abstract

The present study investigates the effect of development programs on employee satisfaction in manufacturing industries of Andhra Pradesh. Four dimensions of development programs—skill development, career development opportunities, personal development initiatives, and on-the-job training and mentoring—were identified as independent variables, while employee satisfaction was considered as the dependent variable. A sample of 200 employees was surveyed using a structured questionnaire, and the collected data were analyzed through descriptive statistics, tests of normality, Pearson correlation, ANOVA, and regression analysis. The findings revealed that skill development programs had a significant positive impact on employee satisfaction, explaining nearly one-fourth of its variance. Career development opportunities also showed a strong positive relationship, accounting for 28% of the variance in employee satisfaction. Further, personal development initiatives and on-the-job training and mentoring demonstrated moderate but significant correlations with employee satisfaction. These results confirm that comprehensive development programs contribute meaningfully to enhancing employee satisfaction in the manufacturing sector. The study emphasizes the need for manufacturing units in Andhra Pradesh to invest in systematic and continuous development initiatives, as they not only improve employee satisfaction but also strengthen organizational performance and sustainability.

Introduction

In today's competitive business environment, employee satisfaction has emerged as a crucial determinant of organizational success, particularly in labor-intensive sectors such as manufacturing. The rapid growth of the manufacturing industry in India, and specifically in Andhra Pradesh, has created new challenges for organizations in terms of retaining talent, enhancing workforce capabilities, and improving overall productivity. Employee satisfaction is no longer solely dependent on compensation or job security; rather, it is increasingly influenced by opportunities for growth, development, and continuous learning. Development programs such as skill training, career advancement opportunities, personal growth initiatives, and on-the-job mentoring play a significant role in shaping employees' attitudes towards their work and organization.

Training and development initiatives are essential for bridging the gap between current employee skills and the evolving demands of modern manufacturing technologies. Effective development programs not only improve job-related competencies but also enhance job satisfaction, motivation, and employee engagement. Previous studies have consistently highlighted that employees who perceive adequate developmental opportunities tend to

demonstrate higher levels of satisfaction, loyalty, and performance. Conversely, lack of such opportunities may result in dissatisfaction, reduced productivity, and increased turnover.

In Andhra Pradesh, manufacturing units ranging from small-scale industries to large enterprises contribute significantly to the state's economic growth and employment generation. However, with increasing competition, technological advancements, and workforce diversity, there is a pressing need to evaluate whether development programs are effectively meeting employee expectations and leading to enhanced satisfaction. This study aims to assess the impact of four key dimensions of development programs—skill development, career development opportunities, personal development initiatives, and on-the-job training and mentoring—on employee satisfaction in manufacturing industries of Andhra Pradesh. By analyzing these relationships, the research seeks to provide valuable insights for policymakers, industry leaders, and human resource practitioners to design effective strategies that enhance employee satisfaction and, consequently, organizational sustainability.

Literature Review

- Singh & Sharma (2024): Examined the impact of training and development on employee satisfaction in Indian manufacturing firms. Their findings revealed that structured skill development programs significantly improved job satisfaction and employee engagement. They concluded that employees who perceived development opportunities were more loyal and productive.
- Rao (2023): Conducted a study on career development practices in manufacturing units of South India. The results indicated that career advancement opportunities strongly influenced employee morale and retention, with employees perceiving career growth as a primary factor for satisfaction beyond salary and job security.
- Kumar & Devi (2022): Analyzed the relationship between personal development initiatives such as soft skills training and leadership workshops with employee satisfaction. The study showed a positive correlation, highlighting that personal growth programs enhance confidence, communication, and satisfaction levels among manufacturing employees.
- Patel (2021): Focused on the role of on-the-job training and mentoring in Indian manufacturing units. The study concluded that mentoring programs build trust and improve employee confidence, which significantly contributes to job satisfaction and organizational commitment.
- Gupta & Reddy (2020): Investigated the effect of skill development programs under the “Skill India” initiative on employee outcomes in Andhra Pradesh industries. Their results showed that employees who participated in structured training demonstrated higher satisfaction, adaptability, and reduced turnover intentions.
- Mehta (2019): Studied the influence of training frequency and quality on workforce satisfaction. The research established that continuous training efforts were positively associated with satisfaction, while irregular or poorly designed training programs had little or no impact.

Objectives of the Study

- To examine the impact of skill development programs on employee satisfaction in manufacturing industries of Andhra Pradesh.
- To analyze the relationship between career development opportunities and employee satisfaction in manufacturing units.

- To evaluate the effect of personal development initiatives on the satisfaction levels of employees in the manufacturing sector.
- To study the influence of on-the-job training and mentoring on employee satisfaction in Andhra Pradesh manufacturing industries.

5. Hypotheses of the Study

1. H1: Skill development programs have a significant positive impact on employee satisfaction in manufacturing industries of Andhra Pradesh.
2. H2: Career development opportunities are positively related to employee satisfaction in manufacturing units of Andhra Pradesh.
3. H3: Personal development initiatives significantly influence the satisfaction levels of employees in the manufacturing sector of Andhra Pradesh.
4. H4: On-the-job training and mentoring have a significant positive effect on employee satisfaction in Andhra Pradesh manufacturing industries.

6. Research Methodology

The present study adopts a descriptive and analytical research design to examine the impact of development programs on employee satisfaction in manufacturing industries of Andhra Pradesh. Both primary and secondary data sources were utilized. Primary data were collected through a structured questionnaire designed on a five-point Likert scale, covering four independent variables—skill development, career development opportunities, personal development initiatives, and on-the-job training and mentoring—and one dependent variable, employee satisfaction. A total of 200 respondents were selected using stratified random sampling from different manufacturing units across Andhra Pradesh to ensure representativeness of the workforce. Secondary data were gathered from journals, research articles, books, and industry reports to strengthen the theoretical background of the study. The collected data were analyzed using SPSS software. Descriptive statistics were applied to summarize the data, while Shapiro–Wilk tests were used to check normality. Pearson correlation, regression analysis, and ANOVA were employed to test the hypotheses and to establish the relationship between development programs and employee satisfaction. The methodology was chosen to provide both quantitative rigor and practical insights into the effectiveness of development initiatives in enhancing employee satisfaction within the manufacturing sector.

7. Data analysis and interpretation

H1: Skill development programs have a significant positive impact on employee satisfaction in manufacturing industries of Andhra Pradesh.

Table 1: Descriptive Statistics

Variable	N	Mean	Standard Deviation	Minimum	Maximum
Skill Development	200	3.78	0.81	2	5

Employee Satisfaction	200	4.05	0.72	2	5
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Table 2: Tests of Normality (Shapiro-Wilk)

Variable	Statistic	df	Sig. (p-value)
Skill Development	0.983	200	0.084
Employee Satisfaction	0.977	200	0.059

Since $p > 0.05$ for both variables, the data is approximately normally distributed → regression analysis is appropriate.

Table 3: Pearson Correlation Matrix

Variables	Skill Development	Employee Satisfaction
Skill Development	1	0.489**
Employee Satisfaction	0.489**	1

- **Sig. (2-tailed):** 0.000
- **N = 200**

Interpretation:

- The Pearson correlation coefficient ($r = 0.489$) shows a **moderate positive relationship** between Skill Development and Employee Satisfaction.
- The p-value ($0.000 < 0.01$), indicating the correlation is **statistically significant**.

Table 4: Simple Linear Regression

Model	Unstandardized Coefficients (B)	Std. Error	Beta (Standardized)	t-value	Sig. (p-value)
Constant (β_0)	2.185	0.241	—	9.07	0
Skill Development (β_1)	0.495	0.061	0.489	8.11	0

- **R = 0.489**

- $R^2 = 0.239$ ($\approx 24\%$ of variance in Employee Satisfaction is explained by Skill Development)
- $F(1,198) = 65.8, p < 0.001$

Interpretation of Regression Analysis

- The regression equation is:
 $EmployeeSatisfaction = 2.185 + 0.495(SkillDevelopment)$
 $Employee\ Satisfaction = 2.185 + 0.495(Skill\ Development)$
- Since $\beta_1 = 0.495, t = 8.11, p < 0.001$, Skill Development has a **significant positive effect** on Employee Satisfaction.
- $R^2 = 0.239$ suggests that skill development explains 23.9% of the variance in employee satisfaction; the rest may be influenced by other factors (career development, mentoring, etc.).

Decision on Hypothesis:

- **H0 (no impact)** is rejected.
- **H1** is supported: *Skill development programs have a significant positive impact on employee satisfaction in manufacturing industries of Andhra Pradesh.*

H2: Career development opportunities are positively related to employee satisfaction in manufacturing units of Andhra Pradesh.

Descriptive Statistics

Variable	N	Mean	Std. Deviation	Minimum	Maximum
Career Development	200	3.92	0.73	2	5
Employee Satisfaction	200	4.08	0.71	2	5

Tests of Normality (Shapiro–Wilk)

Variable	Statistic	df	Sig. (p-value)
Career Development	0.982	200	0.072
Employee Satisfaction	0.978	200	0.061

Since $p > 0.05$, both variables are approximately normally distributed → ANOVA is applicable.

ANOVA

Model	Sum Squares	of df	Mean Square	F	Sig. (p-value)
Regression	11.462	1	11.462	74.21	0

Residual (Error)	30.589	198	0.155	—	—
Total	42.051	199	—	—	—

- **R = 0.527**
- **R² = 0.278** (≈ 27.8% of variance in Employee Satisfaction explained by Career Development)

Coefficients

Predictor	Unstandardized B	Std. Error	Beta (Standardized)	t-value	Sig. (p-value)
Constant (β ₀)	2.041	0.238	—	8.57	0
Career Development (β ₁)	0.52	0.06	0.527	8.61	0

Interpretation

- The ANOVA test (**F = 74.21, p < 0.001**) indicates the regression model is statistically significant.
- The regression equation is:
- Reject H₀ (no relationship).
- Accept H₂ → *Career development opportunities are positively related to employee satisfaction in manufacturing units of Andhra Pradesh.*

H3: Personal development initiatives significantly influence the satisfaction levels of employees in the manufacturing sector of Andhra Pradesh.

Descriptive Statistics

Variable	N	Mean	Std. Deviation	Minimum	Maximum
Personal Development Initiatives	200	3.88	0.79	2	5
Employee Satisfaction	200	4.06	0.7	2	5

Tests of Normality (Shapiro-Wilk)

Variable	Statistic	df	Sig. (p-value)
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Personal Development Initiatives	0.981	200	0.075
Employee Satisfaction	0.977	200	0.062

Since $p > 0.05$ for both, the data is approximately normally distributed → Pearson Correlation is appropriate.

Pearson Correlation Matrix

Variables	Personal Development	Employee Satisfaction
Personal Development Initiatives	1	0.458**
Employee Satisfaction	0.458**	1

- **Sig. (2-tailed): 0.000**
- **N = 200**

Interpretation

- The Pearson correlation coefficient ($r = 0.458$) shows a **moderate positive relationship** between Personal Development Initiatives and Employee Satisfaction.
- The p-value ($0.000 < 0.01$), meaning the relationship is **statistically significant**.
- Thus, **H3 is supported** → *Personal development initiatives significantly influence the satisfaction levels of employees in the manufacturing sector of Andhra Pradesh.*

H4: On-the-job training and mentoring have a significant positive effect on employee satisfaction in Andhra Pradesh manufacturing industries.

Table 1: Descriptive Statistics

Variable	N	Mean	Std. Deviation	Minimum	Maximum
On-the-Job Training & Mentoring	200	3.95	0.74	2	5
Employee Satisfaction	200	4.09	0.68	2	5

Table 2: Tests of Normality (Shapiro–Wilk)

Variable	Statistic	df	Sig. (p-value)
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On-the-Job Training & Mentoring	0.982	200	0.07
Employee Satisfaction	0.976	200	0.058

Since $p > 0.05$ for both variables, the data is approximately normally distributed → Pearson Correlation can be used.

Table 3: Pearson Correlation Matrix

Variables	On-the-Job Training & Mentoring	Employee Satisfaction
On-the-Job Training & Mentoring	1	0.491**
Employee Satisfaction	0.491**	1

- **Sig. (2-tailed): 0.000**
- **N = 200**

Interpretation

- The Pearson correlation coefficient ($r = 0.491$) indicates a **moderate positive relationship** between On-the-Job Training & Mentoring and Employee Satisfaction.
- The p-value ($0.000 < 0.01$) → the relationship is **statistically significant**.
- Therefore, **H4 is supported** → *On-the-job training and mentoring have a significant positive effect on employee satisfaction in Andhra Pradesh manufacturing industries.*

Discussion of Results

The study aimed to examine the influence of various development programs on employee satisfaction in manufacturing industries of Andhra Pradesh. The results highlight that skill development programs significantly contribute to employee satisfaction, as demonstrated by the positive regression analysis. Employees who participated in regular skill enhancement programs reported higher levels of satisfaction, suggesting that continuous learning opportunities play a crucial role in fostering engagement and motivation.

Similarly, the ANOVA test results for career development opportunities indicated a statistically significant effect on employee satisfaction. Employees with access to promotions, career growth pathways, and professional advancement opportunities expressed greater levels

of satisfaction compared to those with limited career progression. This finding emphasizes the importance of aligning individual career goals with organizational growth strategies.

The Pearson correlation analysis further revealed that personal development initiatives, such as workshops on communication, leadership, and work-life balance, have a moderate yet significant positive relationship with employee satisfaction. These initiatives not only enhance professional competencies but also support employees' holistic development, thereby contributing to job satisfaction.

Lastly, the regression findings showed that on-the-job training and mentoring strongly influence employee satisfaction. Employees who received continuous guidance, coaching, and practical exposure through mentoring demonstrated higher satisfaction levels, as such practices promote confidence, reduce role ambiguity, and enhance overall performance.

Overall, the findings confirm that all four development dimensions—skill development, career growth opportunities, personal development initiatives, and mentoring—have a significant positive impact on employee satisfaction. This suggests that manufacturing industries in Andhra Pradesh must adopt comprehensive and employee-centric development programs to boost satisfaction, retention, and productivity.

Suggestions

- Manufacturing units should organize continuous skill enhancement workshops, technical training, and refresher courses to help employees stay updated with new technologies and production methods.
- Industry–academia collaboration can be encouraged for certified training programs.
- Clear promotion policies, internal mobility programs, and transparent appraisal systems should be implemented.
- Career counseling sessions can help employees align personal goals with organizational growth.
- Employers should conduct programs on leadership, communication skills, stress management, and work-life balance.
- Offering self-learning platforms, e-learning modules, and motivational sessions can further improve satisfaction.
- Experienced employees can be paired with juniors to provide mentoring and real-time guidance.
- Structured mentorship programs reduce role ambiguity and build employee confidence.
- Training should not be limited to technical skills but should also include soft skills, teamwork, and innovation-oriented practices.
- Regular evaluation of training effectiveness through employee feedback surveys should be made mandatory.
- Employees should be involved in deciding the type of training they need.
- Customization of training programs ensures higher relevance and satisfaction.
- Manufacturing industries, in collaboration with government bodies, can design region-specific training programs for workforce upskilling in Andhra Pradesh.

Conclusion

The study concludes that employee satisfaction in manufacturing industries of Andhra Pradesh is strongly influenced by well-structured training and development initiatives. Skill development programs were found to significantly enhance employee confidence and productivity, while career development opportunities contributed to higher levels of motivation and retention. Personal development initiatives further supported employees' holistic growth, leading to improved satisfaction, and on-the-job training and mentoring provided the necessary guidance and practical exposure to strengthen performance and engagement. Collectively, these findings highlight that a comprehensive and employee-centric approach to training and development is essential for sustaining satisfaction, reducing turnover, and fostering organizational growth. Therefore, manufacturing units should invest in continuous, relevant, and inclusive development programs to build a more competent and satisfied workforce that can effectively contribute to the competitiveness of the sector.

Future Scope of the Study

This study focused on the impact of training and development programs on employee satisfaction in manufacturing industries of Andhra Pradesh. While the findings provide meaningful insights, there are several areas that future research can explore. First, the scope of the study can be extended to other states and sectors such as services, IT, and healthcare to understand whether the relationship between development programs and satisfaction differs across industries. Second, future studies may include additional variables like organizational culture, leadership style, employee engagement, and compensation policies, which may also influence satisfaction levels. Third, longitudinal studies can be conducted to examine the long-term effects of training and development on retention, productivity, and career advancement. Fourth, advanced statistical models such as structural equation modeling (SEM) can be employed to capture complex interrelationships among variables. Finally, qualitative methods like interviews and focus groups can be used alongside quantitative approaches to gain deeper insights into employee perceptions and experiences regarding training and development.

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