

EMPLOYEE SATISFACTION SURVEY WITH PREDICTIVE INSIGHTS USING SPSS IN A MID-SIZED IT FIRM

1. Background and Problem Statement

A mid-sized IT services firm reported increasing turnover among junior and mid-level staff, despite satisfactory compensation benchmarks. HR suspected dissatisfaction with internal communication, growth opportunities, and work-life balance as potential causes. The company commissioned an employee satisfaction survey to identify key dissatisfaction drivers. SPSS was used for advanced analysis to generate predictive models for attrition risk and design targeted retention interventions.

2. Objectives

- To develop a structured employee satisfaction survey capturing emotional, organizational, and operational factors
- To quantify satisfaction levels across teams and demographics
- To identify predictors of low satisfaction using regression and decision tree models
- To deliver a predictive model for flagging high-risk employees

3. Methodology

3.1 Survey Design

- Number of Questions: 35 (5-point Likert scale and categorical items)
- Dimensions Covered: Leadership, Communication, Workload, Career Development, Manager Support, Mental Well-being
- Pilot Tested for clarity and psychometric reliability

3.2 Sampling and Data Collection

- Total Respondents: 420 (response rate 70%)
- Inclusion: Full-time staff across tech, design, admin, and QA
- Platform: Internal HR portal (anonymized submissions)

3.3 Key Variables

- Dependent Variable: Overall Satisfaction Score
- Independent Variables: Department, Experience Level, Feedback Quality, Work-Life Balance, Management Responsiveness
- Target Variable for Model: Binary Attrition Intention (Yes/No)

4. SPSS Analysis Techniques Used

- Descriptive Statistics: Mean satisfaction by team and role
- Reliability Testing: Cronbach's Alpha = 0.89 for 20 attitudinal items
- Bivariate Correlation Matrix for multicollinearity check
- Multiple Linear Regression: Modeled Satisfaction Score
- CHAID Decision Tree: Predictive model for attrition intention
- Cross-tabulations: Attrition Intention vs Department, Experience

5. Results and Insights

- Regression $R^2 = 0.58$
 - Significant Predictors:
 - Manager Support ($\beta = .41, p < .001$)
 - Growth Opportunities ($\beta = .32, p < .01$)
 - Work-Life Balance ($\beta = .26, p < .05$)
- Decision Tree Model Accuracy: 82%
 - Key rule: Employees with <2 years of tenure and poor rating for "Feedback Clarity" had 70% attrition intent
- QA and Support teams showed the lowest mean satisfaction (3.1/5)
- Most common open-ended complaints: no mentorship program, unstructured performance reviews

6. Deliverables

- SPSS Syntax Files, Raw Dataset (.sav), and Output Viewer
- Summary Report in Harvard Format with charts and actionable commentary

- Predictive Attrition Model (decision tree rules as slides)
- Team-level dashboards highlighting red zones

7. Stakeholder Relevance

Academic

- Demonstrates SPSS use in HR analytics and predictive modeling
- Example for courses in organizational behavior, workforce analytics, and survey analysis

Corporate

- Enables proactive HR planning and better employee engagement strategies
- Supports data-backed development of retention programs and manager KPIs