

**Amity University Online**

**Project Report**

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**Declaration**

I hereby declare that the project report entitled "Analysis of Employee Attrition Trends" is an original work carried out by me as part of my academic curriculum. The report has been prepared based on independent research, analysis, and interpretation of available data.

I confirm that I have not relied on any external professional or organizational assistance in the preparation of this report. This work has not been submitted to any other institution, organization, or publication for any purpose, nor does it contain material published or written by others, except where due credit has been given.

I take full responsibility for the originality and authenticity of the content presented in this report.

I affirm that this project complies with the ethical guidelines and academic integrity standards required by Amity University. Any resemblance to existing research is purely coincidental and unintended.

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**Acknowledgment**

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Lastly, I would like to acknowledge my family and friends for their unwavering support and encouragement, which motivated me to undertake and complete this study with dedication and enthusiasm.

This project report is a product of my independent effort and passion for exploring and analysing real-world data. I hope it adds value to the academic field and serves as a meaningful contribution to the subject matter.

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# **Abstract**

Employee attrition is an important and complex problem that companies need to solve to keep things running well and ensure workers are happy. This study looks closely at employee turnover patterns in a medium-sized company. By using numbers and clear visuals, the research finds key trends and reasons behind attrition. The company being studied has 1,480 employees, and the attrition rate is 16.1%, which means 238 employees left their jobs during the studied time.

The analysis considers significant factors such as age, education, salary ranges, and job roles. These factors are studied carefully to show how they affect employee turnover. For instance, younger employees and those with lower salaries tend to leave their jobs more often, which may indicate they are not happy with pay or chances to grow in their careers. High turnover rates are also observed in job roles such as laboratory technicians and research scientists, presumably due to job stress or few opportunities for promotion.

While recognizing the aforementioned patterns, this study delves deeper into how attrition might affect organizational stability, financial health, and morale. High rates of turnover also mean that not only is there a disruption of team dynamics, but also more costs in recruiting, onboarding, and training. The paper seeks to enlighten management by providing actionable insights and strategic recommendations.

This study aims to help create strong plans to keep employees by looking at the main reasons why they leave. Suggestions include improving pay, offering training programs, and creating a friendly workplace. These actions seek to lower turnover, boost employee involvement, and make the organization stronger.

# **Introduction of the Study**

## **Introduction to Employee Attrition**

Employee attrition is how often workers leave a company. It is an important issue in today’s changing business world. High rates of employees leaving can cause higher hiring costs, interrupted work processes, loss of important knowledge, and a weaker brand image. These problems affect not just how smoothly the business runs, but also worker happiness and the company’s long-term goals. Knowing and tackling the main reasons why employees leave is important for creating good plans to keep them.

## **Focus and Data Analysis of Study**

This study tries to uncover the various causes of employee departure from a mid-sized company having 1480 employees with a reported attrition rate of 16.1%, implying that there are losses of approximately 238 employees per year. Data on age, educational background, salary range, and type of job would help identify several reasons why people leave. It is about understanding how external factors such as career prospects and salary along with internal issues such as job dissatisfaction and poor work-life balance drive employee movement.

## **Factors Influencing Employee Attrition**

There are many external factors, such as better career opportunities, higher salaries, and better work environments, that influence employee turnover. Internally, factors like job dissatisfaction, lack of career development, inadequate compensation, and poor work-life balance often push employees to seek alternatives. It was established that the largest attrition rate occurred within the 26-35-year-old employees. This was contributed by aspirations of career advancement. Attrition also occurs more within employees whose salaries are the lowest. Specific job types also experience attrition, like the laboratory technician and research scientists who feel undercompensated or underqualified in their respective tasks.

## **Recommendations and Strategic Interventions**

The study reveals factors associated with people and their jobs, and it provides a plan for companies to reduce turnover rates. Using data charts and statistics, the study recommends improving pay, creating career development programs, making jobs more interesting, and building a positive workplace culture. In the end, reducing employee turnover is about making a productive workforce that helps the company succeed.

# **Objectives of the Study**

## **1. Important Demographic and Job Factors Influencing Attrition**

This objective aims at knowing what factors such as age, education, salary, and job titles affect turnover. The research is trying to find patterns to help come up with better methods of retaining employees.

## **2. Attrition Trends by Departments and Job Roles**

The research will explore identifying the trends in attrition among the departments and job categories of the organization. The study will be able to design employee retention strategies once the laboratory technician and research scientists are determined as the two major areas of the organization that face the highest rate of turnover.

## **3. Evaluating Compensation Levels on Employee Turnover**

Compensation is one of the factors that keep employees. This objective seeks to explore the relationship between employee turnover and salary levels, verify whether the pay system of the organization is good enough, and find ways to make it better.

## **4. To Understand Educational Backgrounds and How They Influence Turnover**

It investigates the degree to which workers' education has an effect on what they demand from work and their levels of satisfaction. This analysis specifically uses data regarding life science and medicine graduates to understand whether such studies actually cause increased exit from work.

## **5. Recommendations using Analytics that Improve Retention**

Based on the findings of the analysis, this study will attempt to provide simple, well-supported recommendations that may help retain the employees. Such recommendations will emphasize the facilitation of employee involvement, reducing employee turnover, and building a positive and lasting work culture.

# **Literature Review/Background Study**

Attrition among employees is one of the significant issues impacting the sustainability of organizations, the efficiency of their operations, and financial health. A high turnover affects workflows, boosts recruitment and training costs, and generally reduces overall productivity. Thus, to successfully handle this problem, it would be necessary to know the real reasons behind this situation and introduce successful retention techniques.

## **Theoretical Perspectives on Attrition and Retention**

Maslow's Hierarchy of Needs proves that workers require more than financial compensation; they are concerned about self-actualization, esteem, and belonging. Herzberg's Two-Factor Theory explains that career development and job significance can retain workers and that pay and a clean workplace can remove dissatisfaction. These theories demand an appropriate approach to looking after the needs of the employee.

## **Factors Driving Employee Turnover**

Research shows that there are several main reasons why people leave their jobs. These include low pay, few chances to advance in their careers, bad work-life balance, and an unhelpful workplace culture. A report from the Society for Human Resource Management (SHRM) says that workers aged 26-35 are most likely to quit because of their career goals. Also, jobs with repetitive tasks, like laboratory technicians, often have higher rates of leaving because of unhappiness and limited opportunities to grow.

## **Leveraging Data Analytics for Retention**

One of the very important uses of data in decision-making to reduce employee turnover is by analysing information such as age, education, salary, and job positions. One identifies groups of employees likely to leave. For example, pay change and career development programs have been effective in retaining employees. The methods ensure that plans are suited to the different needs and goals of various employee groups.

## **Conclusion**

This study combines the theories with data from the organizational setup to provide an all-inclusive method of handling turnover in employees. Using data visualization and evidence-based strategies, an organization can reduce the rates of employee turnover and bring about a workforce that is better engaged and motivated. Connecting the insights with actions is crucial when it comes to forming a strong, successful organizational culture.

# **Research Methodology**

This research is done based on a data-driven approach to understand why people leave and how to reduce turnover. The method applied is a mix between numerical analysis and visualization tools toward findings and insights.

## **Data Source and Collection**

Data Source and Collection Sources for this research came from a public dataset on Kaggle labelled "HR Analytics: Prediction - Why Do People Resign?"

URL: <https://www.kaggle.com/code/paramarthasengupta/hr-analytics-prediction-why-do-people-resign/notebook> .

This dataset has all the employee information- age, education, salary, job role, and whether they left the company. It provides a good base for analysis.

## **Data Analysis Techniques**

The study made use of statistical tools and methods of visualization for data analysis. Attrition by age, education level, salary slabs, and job roles was subjected to analysis to examine these sections which seem to be at a great risk. Visualization tools (Power Bi), like bar charts and pie charts, have been used to present data in an easily understandable format, thereby helping out in effective interpretation.

# **Research Process**

1. Data Cleaning: Irrelevant or missing data entries were handled to ensure accuracy.

2. Descriptive Analysis: Key metrics like attrition rate, average salary, and attrition count were calculated.

3. Visualization: Trends and patterns were visualized for clear communication of insights.

4. Interpretation: Insights were drawn from the analysed data to inform recommendations.

# **Data Analysis & Interpretation**

## **Attrition by Age**

18-25 years: 44 employees

26-35 years: 116 employees

35-45 years: 43 employees

46-55 years: 27 employees

55+ years: 8 employees

Reason: The largest attrition is that of the age group 26-35, which could be attributed to reasons like stagnation in career, failure to meet expectations, or low promotion. A few customized interventions, such as mentorship and more rewarding career advancement, would go a long way in reducing this. The age group 18-25 also faces significant attrition, often ascribed to entry-level dissatisfaction or job expectation mismatch

## **Attrition by Education**

Life Sciences: 37%

Medical: 26%

Marketing: 15%

Technical Degree: 13%

Other: 5%

Conclusion: The largest proportion of turnover is among employees with life sciences and medical backgrounds, indicating a mismatch between job roles and career aspirations. Specialized training programs and diversified roles aligned with their expertise may improve job satisfaction and retention rates. Marketing and technical degree holders also show significant attrition, which requires further analysis of role suitability and professional development opportunities.

## **Attrition by Salary Slab**

Up to 5k: 163 employees

5k-10k: 49 employees

10k-15k: 21 employees

15k+: 5 employees

Conclusion: The graph shows that the highest attrition is seen in the employees who are earning up to 5k. This means that the pay is not good enough. Fair pay and performance-based rewards can help retain employees in this category. Employees in higher pay brackets have less attrition, but they also need more engagement activities to retain skilled employees.

## **Attrition by Job Role**

Laboratory Technician: 62 employees

Research Scientist: 47 employees

Sales Representative: 33 employees

Human Resources: 12 employees

Healthcare Representative: 9 employees

Research Director: 2 employees

Interpretation: Laboratory technicians and research scientists exhibit the highest attrition rates, likely due to role-specific stressors, limited advancement opportunities, and lack of recognition.

# **Results & Discussion**

Analysis of attrition factors reveals various demographic attributes, educational qualifications, salary discrepancies, and dynamics in the role at work that have contributed to the turnover of employees. Turnover among middle career-stage and low salary-bracket employees should be a focal point for retention efforts. Higher attrition of laboratory technicians and research scientists call for role-specific interventions. By aligning organizational practices to employee expectations, and by making a culture of recognition and growth, companies will be able to reduce turnover levels significantly and strengthen workforce stability.

# **Recommendations & Conclusion**

## **Recommendations:**

Compensation structures should be revised to be competitive in every bracket.

Mid-career career development programs can be initiated for professionals.

The culture of recognition can be made through regular reviews and rewards to the employees.

Targeted retention strategies can be implemented for high-risk roles such as laboratory technicians.

Provide career development opportunities through training and skill upgrading.

Feedback mechanism should be created to address employees' concerns.

Create an organization culture that supports the values of inclusion and teamwork.

## **Conclusion:**

This research demonstrates how various factors impact employee leaving and highlights the need to consider money-related and other factors in keeping employees. Using the strategies proposed, companies can reduce turnover, enhance employee involvement, and achieve sustainable growth. Measures taken to address employee leaving make operations run better but also contribute to a positive workplace. The results provide useful advice for companies seeking to manage their workforce better and attain long-term success.

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# **Hr Data Analytics Dashboard Project on Power Bi**

Figure 1 HR Analytics Dashboard

**Key Insights and Strategic Implications from HR Analytics Dashboard Data**

1. Attrition Trends

- The overall attrition rate is 16.1%, with a significant proportion occurring in employees aged 26-35 (116 individuals), suggesting that this age group is most prone to turnover.

- Attrition by salary shows that employees earning up to 5K have the highest turnover (163), indicating a strong correlation between lower salaries and higher attrition.

2. Educational Background Impact

- The highest attrition rates are observed among employees with life sciences backgrounds (37%), followed by those with medical education (26%). This points to the need for industry-specific retention programs to address challenges in these fields.

3. Job Role-Specific Attrition

- Laboratory Technicians (62) and Research Scientists (47) account for the highest attrition by job role, indicating possible dissatisfaction with job conditions or career advancement opportunities.

- Senior roles like Research Directors (2) have minimal turnover, emphasizing a stronger retention rate in leadership positions.

4. Departmental Insights

- The Research & Development and Sales departments are the most impacted by attrition, reflecting either workload challenges or unmet job expectations in these areas.

5. Tenure Influence

- Employees with 0-5 years of tenure exhibit the highest attrition, reinforcing the importance of onboarding and early engagement strategies to improve retention.

6. Gender Dynamics

- Attrition data across genders suggests no significant disparity, highlighting an even distribution of turnover between male and female employees.

7. Strategic Recommendations

- Enhance compensation packages for employees in lower salary brackets to address financial dissatisfaction.

- Develop targeted retention programs for employees in life sciences and medical fields.

- Improve job satisfaction and growth opportunities for high-attrition roles like Laboratory Technicians and Research Scientists.

- Introduce robust onboarding programs and mentorship opportunities for employees with less than five years of tenure to improve early engagement.

End.