

IBM - MINI SPRINT – DESCRIPTIVE ANALYSIS

DATA ANALYST – RAJVI MANDAVIA

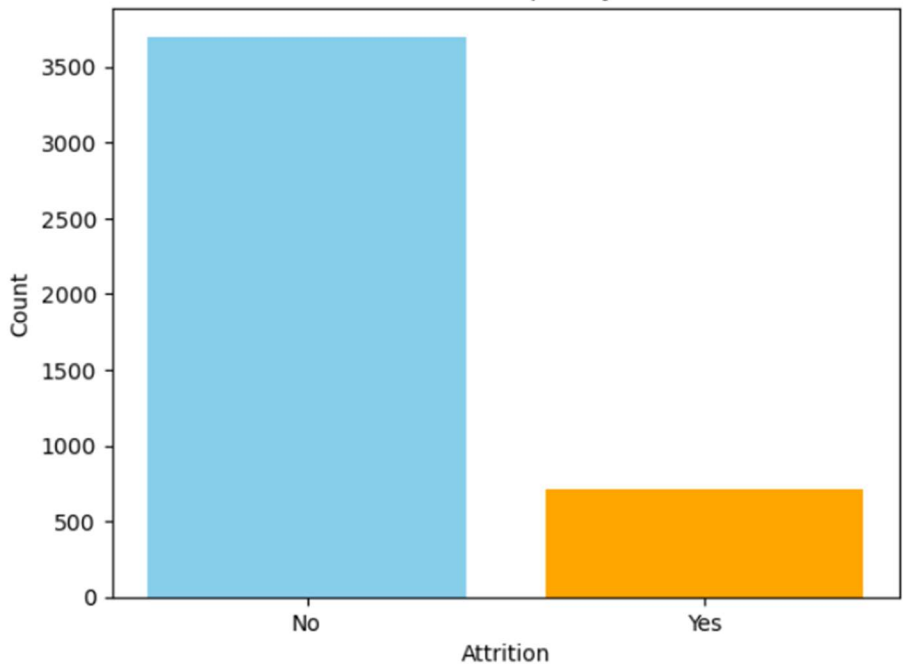
Our goal is to gain a deeper understanding of the challenges and opportunities within your company by analyzing the HR data provided. By uncovering key insights, we aim to support strategic decision-making and reduce the challenging high churn rate. We're eager to collaborate with you to identify areas for improvement and drive positive change within your company.

STAKEHOLDER QUESTIONS

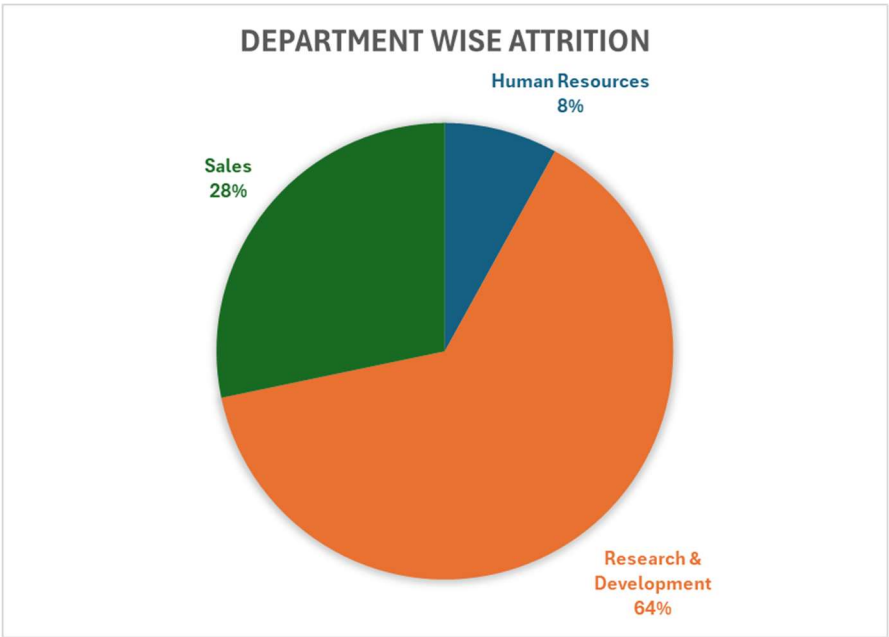
1. After looking at the variables that could be affecting attrition, work-life balance, and looking at working data of employees, can you share about your overtime and overtime pay policies?
2. 25% of employees leave after year 1. Is there any program being put in place that could slow this attrition?
3. The R&D Department has the highest attrition. Males leave at a much higher rate than females. Are there any specific reasons identified for the higher turnover within the R&D department?
4. Employees with 11-15% salary hike left had maximum attrition amongst others. Would you share how is the salary hike structure determined?
5. Could you explain how the company fosters gender diversity & inclusion in the workplace as our observation is that 441 males left out of a total of 711?
6. Considering Job Level 1 and 2 has maximum attrition (537 of 711), are there any specific reasons for this high rate among the lower job levels?
7. The current churn rate is 16%, what be the ideal percentage that you would bring this down to?

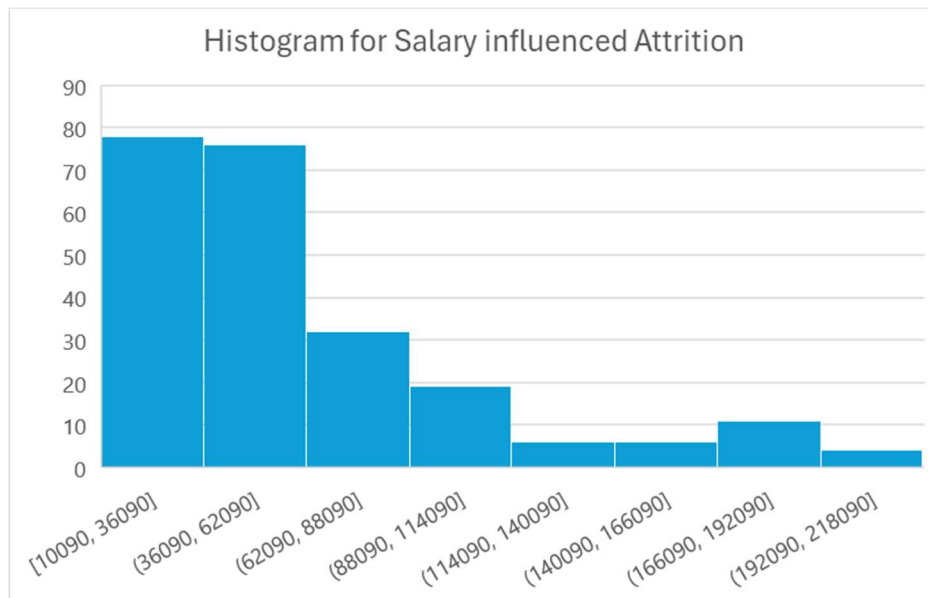
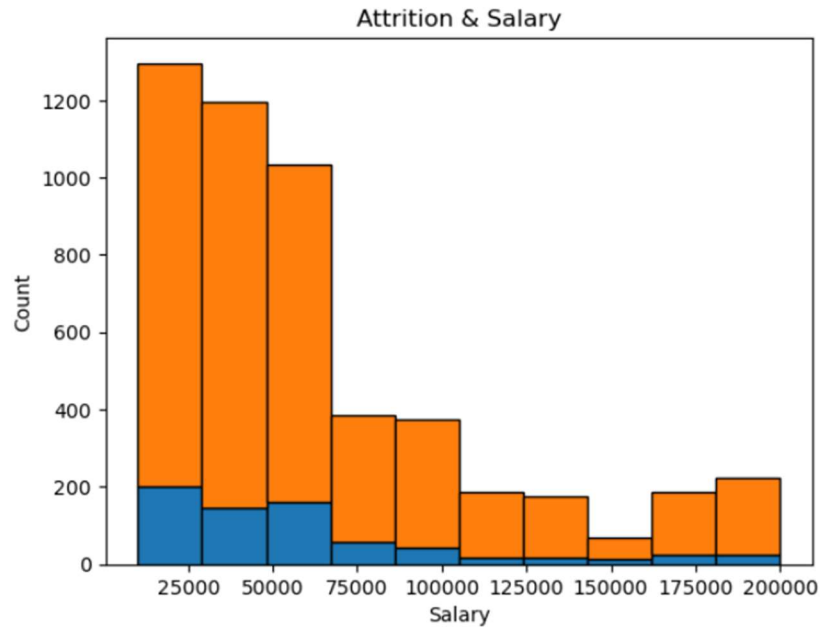
DESCRIPTIVE ANALYSIS & DATA VISUALIZATION

This bar chart shows the attrition rate at Bain & company.

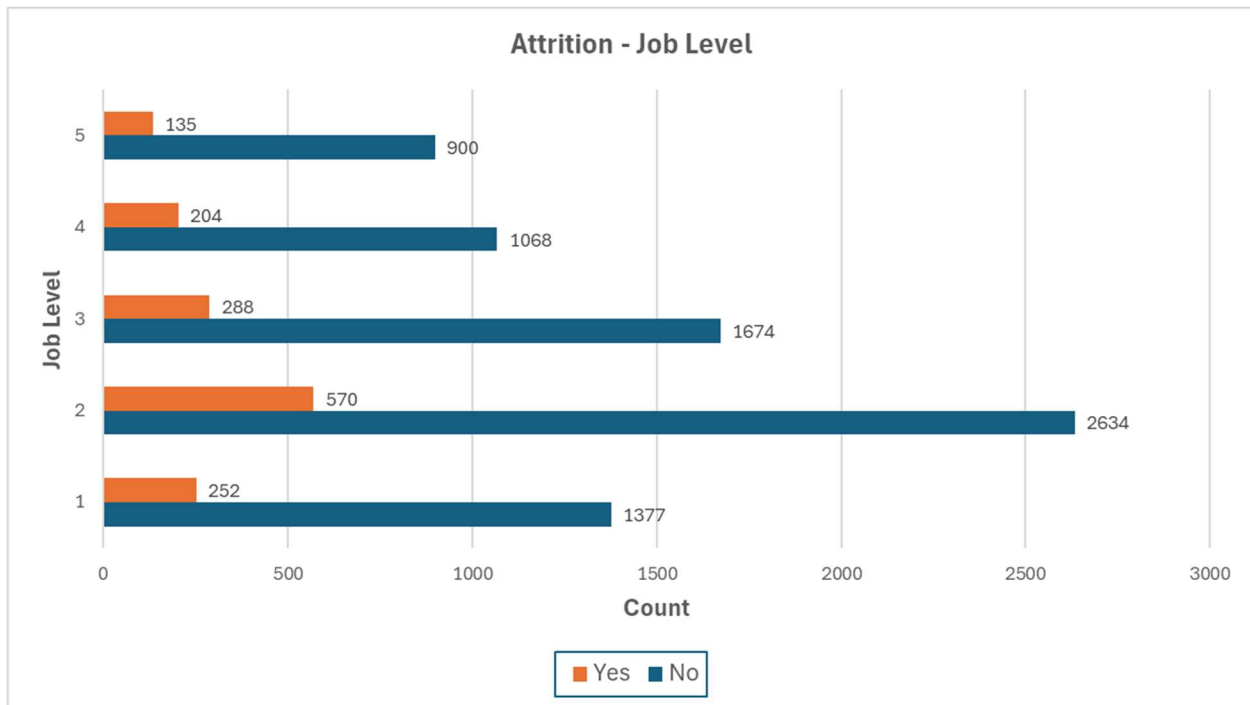


The pie chart shows that Research & Development (64%) is the department with the most employee attrition in the client company, followed by Sales (28%) and Human Resources (8%). This can help the company focus its efforts on retaining talent in these key areas.

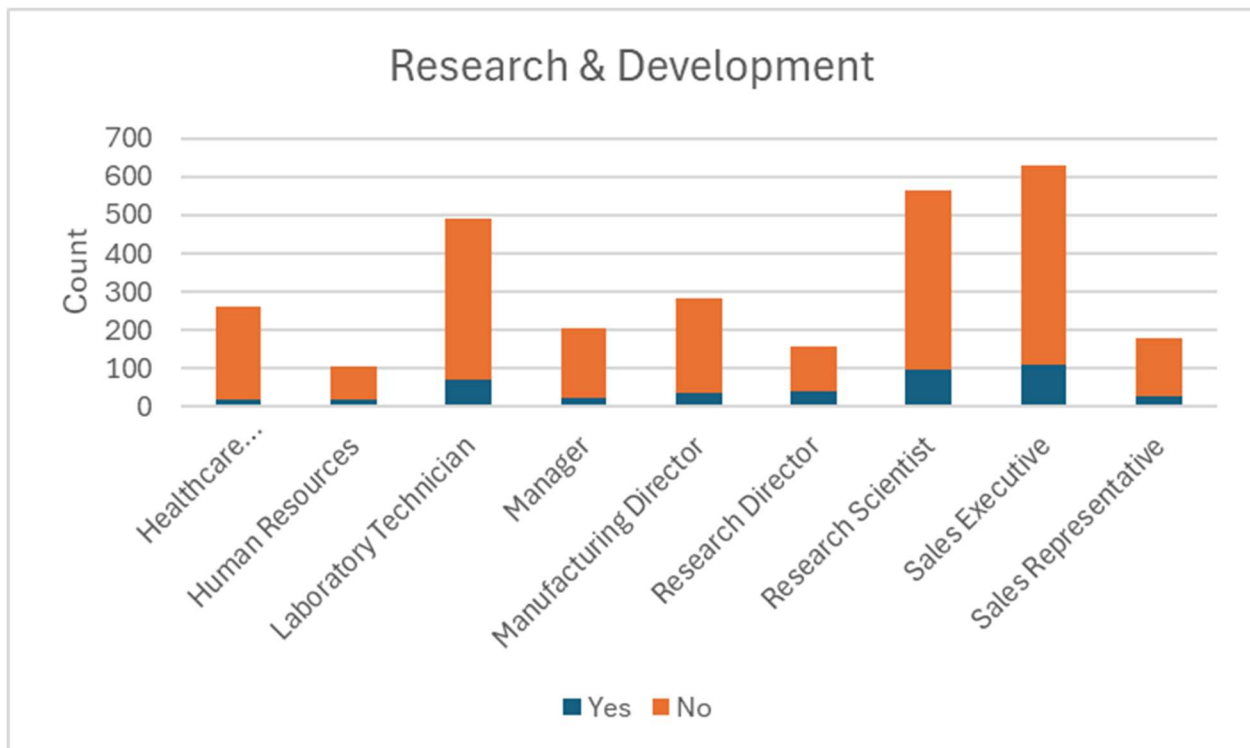




The histogram shows the distribution of employees who left (Yes) and stayed (No) at the client company across different salary ranges. While it does not reveal a clear relationship between salary and attrition, it can be a starting point for further analysis to identify other factors influencing employee turnover. For instance, the company could explore reasons for attrition among employees in the lowest and highest salary ranges.



job level 2 experiences the highest attrition rate within the client company. This suggests that employees in mid-level positions are more likely to leave compared to other levels. Focusing retention efforts on this specific job level could be highly beneficial.



Attrition	Healthcare Representative	Human Resources	Laboratory Technician	Manager	Manufacturing Director	Research Director	Research Scientist	Sales Executive	Sales Representative
Yes	3	0	18	3	6	0	3	24	0
No	6	3	21	6	18	3	33	30	12

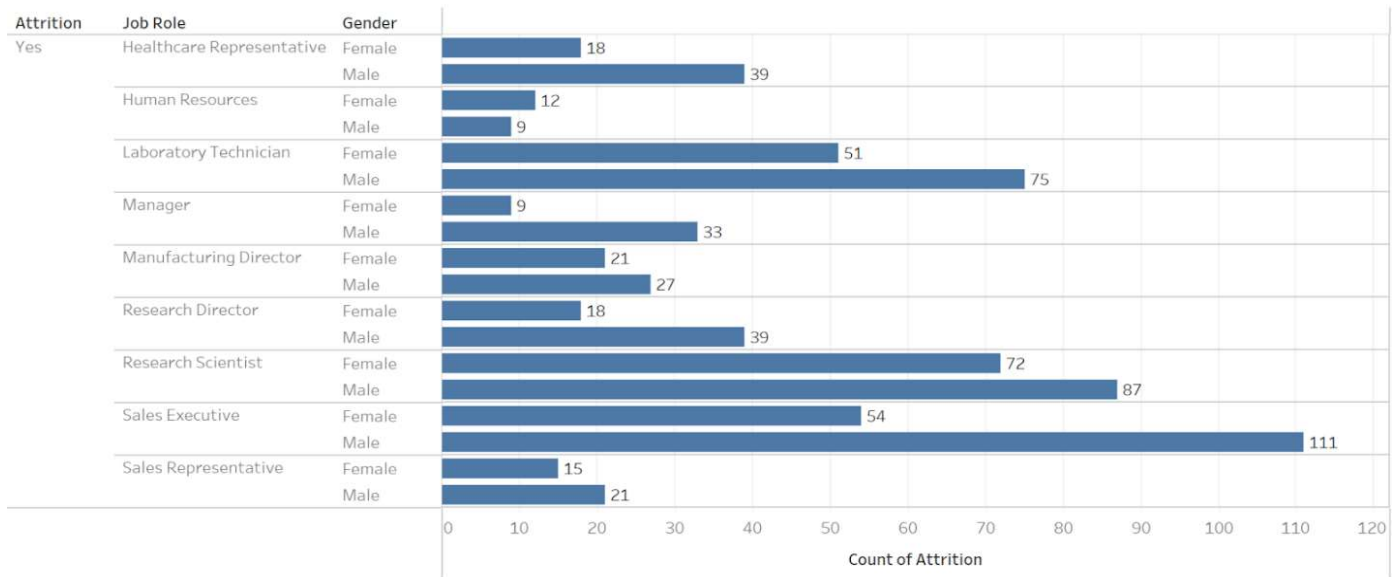
This stacked bar chart shows the number of employees who left (Yes) compared to those who stayed (No) at the client company, broken down by job role. Sales Executive followed by Laboratory Technician has the highest number of employees who left the company, which suggests it has the highest attrition rate.

The MEANS Procedure

Variable	N	Mean	Std Dev	Minimum	Maximum
Age	4410	36.9238095	9.1333013	18.0000000	60.0000000
DistanceFromHome	4410	9.1925170	8.1050255	1.0000000	29.0000000
Education	4410	2.9129252	1.0239326	1.0000000	5.0000000
EmployeeCount	4410	1.0000000	0	1.0000000	1.0000000
EmployeeID	4410	2205.50	1273.20	1.0000000	4410.00
JobLevel	4410	2.0639456	1.1066888	1.0000000	5.0000000
MonthlyIncome	4410	65029.31	47068.89	10090.00	199990.00
NumCompaniesWorked	4391	2.6948303	2.4988869	0	9.0000000
PercentSalaryHike	4410	15.2095238	3.6591075	11.0000000	25.0000000
StandardHours	4410	8.0000000	0	8.0000000	8.0000000
StockOptionLevel	4410	0.7938776	0.8518834	0	3.0000000
TotalWorkingYears	4401	11.2799364	7.7822221	0	40.0000000
TrainingTimesLastYear	4410	2.7993197	1.2889782	0	6.0000000
YearsAtCompany	4410	7.0081633	6.1251354	0	40.0000000
YearsSinceLastPromotion	4410	2.1877551	3.2216993	0	15.0000000
YearsWithCurrManager	4410	4.1231293	3.5673267	0	17.0000000

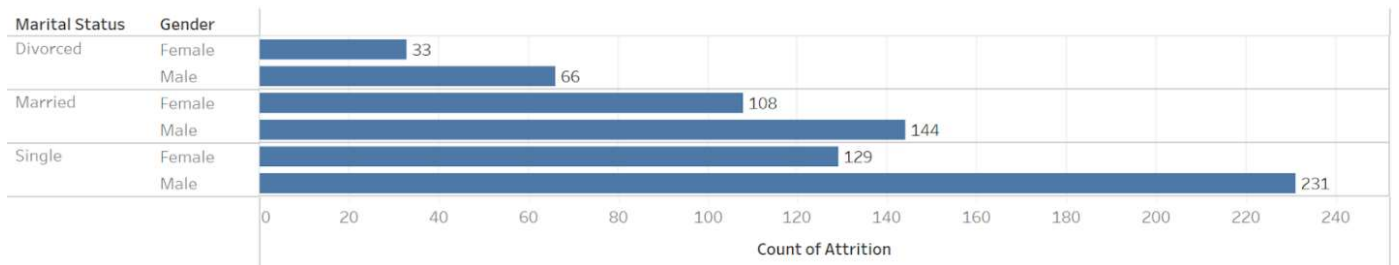
This table summarizes various employee attributes at the client company. While it cannot identify the major reasons for attrition on its own, it provides insights into factors that could be relevant, such as age, education level, and promotion history.

Attrition Count v Job Role (Gender)

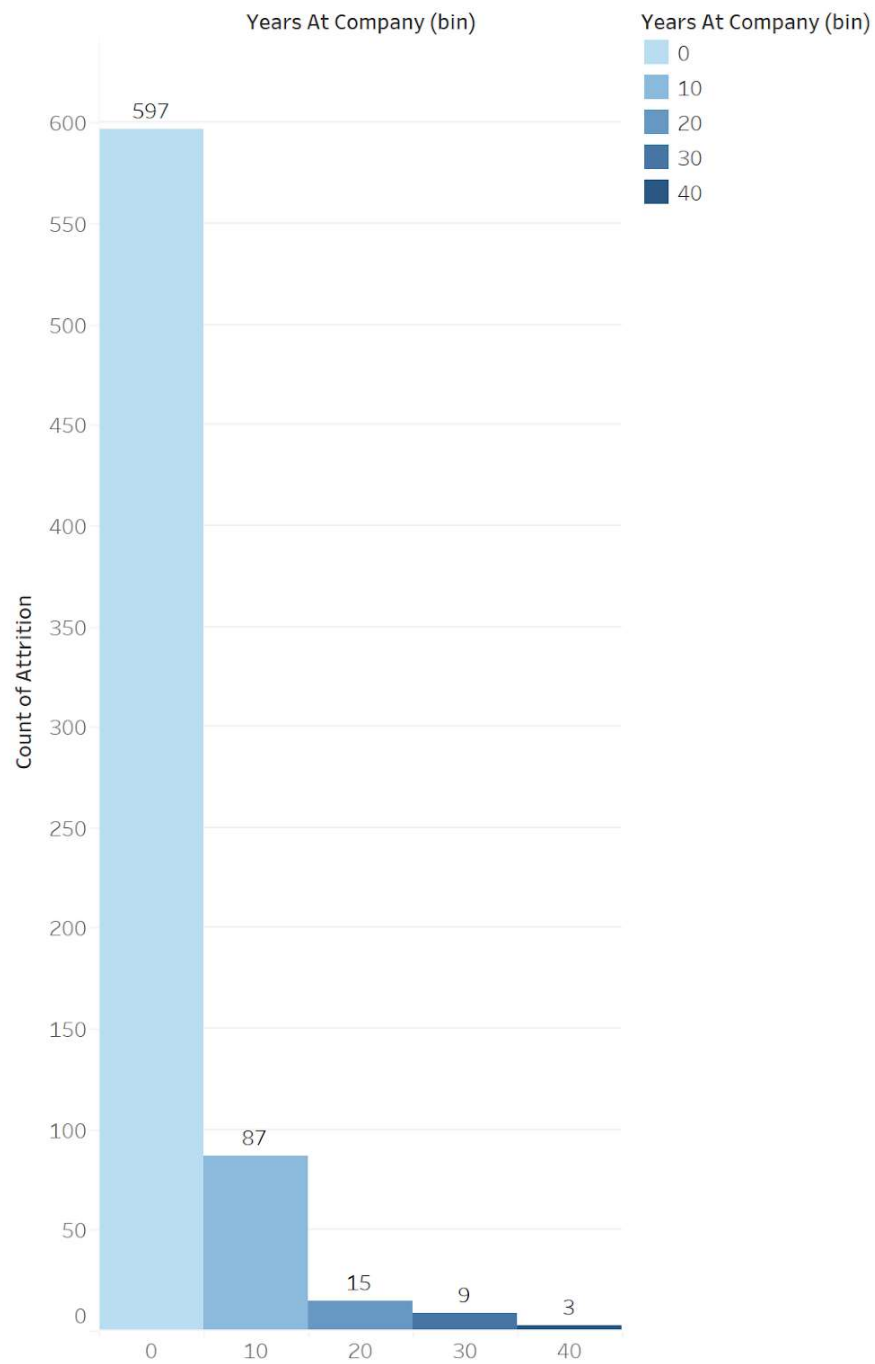


The bar chart reveals gender disparity in attrition across various job roles at the client company. For instance, in the 'Sales Representative' role, significantly more males (87) left the company compared to females (15). This trend is present across most job roles, and further analysis is needed to understand the reasons behind this gender gap in attrition.

Attrition (Marital Status & Gender)



Attrition v Years at Company



Attrition rate decreases with employee tenure at the client company. This suggests that employees who've been with the company in their early years are more likely to leave. This indicates that there might be a lack of career growth opportunities, stagnation in salary, or a decline in job satisfaction over time.

RECOMMENDATIONS

This analysis of employee attrition at your client company revealed several key insights. While tenure and job level were initially suspected as influencing factors, a deeper look identified specific areas requiring attention:

High Attrition in R&D and Sales: The data shows a concerning high attrition rate among R&D employees and Sales Executives.

Loyalty Paradox: Retention efforts should consider the surprising trend of higher attrition among longer-tenured employees.

Here's a checklist of recommendations to address these findings and create a more positive work environment, ultimately reducing employee turnover:

Targeted Retention Strategies:

- **R&D and Sales Department Focus:** Conduct in-depth exit interviews or stay interviews with Sales Representatives to understand their reasons for leaving or staying. Analyze compensation packages for competitiveness in the current market. Evaluate workloads and stress levels within the Sales department.
- **Investing in Long-Term Employees:** Develop clear career development paths for employees at all levels, with a particular focus on those who have been with the company for a long period. Review promotion opportunities and ensure a fair and transparent process. Regularly assess employee engagement and conduct surveys to identify areas for improvement, especially among tenured staff.
- **Overall Retention Efforts:** Promote a culture of work-life balance with flexible work arrangements and well-defined boundaries between work and personal time. Offer competitive compensation and benefits packages that cater to the needs of your diverse workforce. Regularly recognize and reward employees for their contributions. Invest in ongoing training and development opportunities to help employees stay current in their fields and feel valued for their expertise.

By implementing these recommendations, Bain & Company can address the specific factors leading to attrition and create a more positive work environment that fosters loyalty and retention, resulting in up to more than **40%** more retention of employees.