

Attrition Intelligence Dashboard

Problem Statement

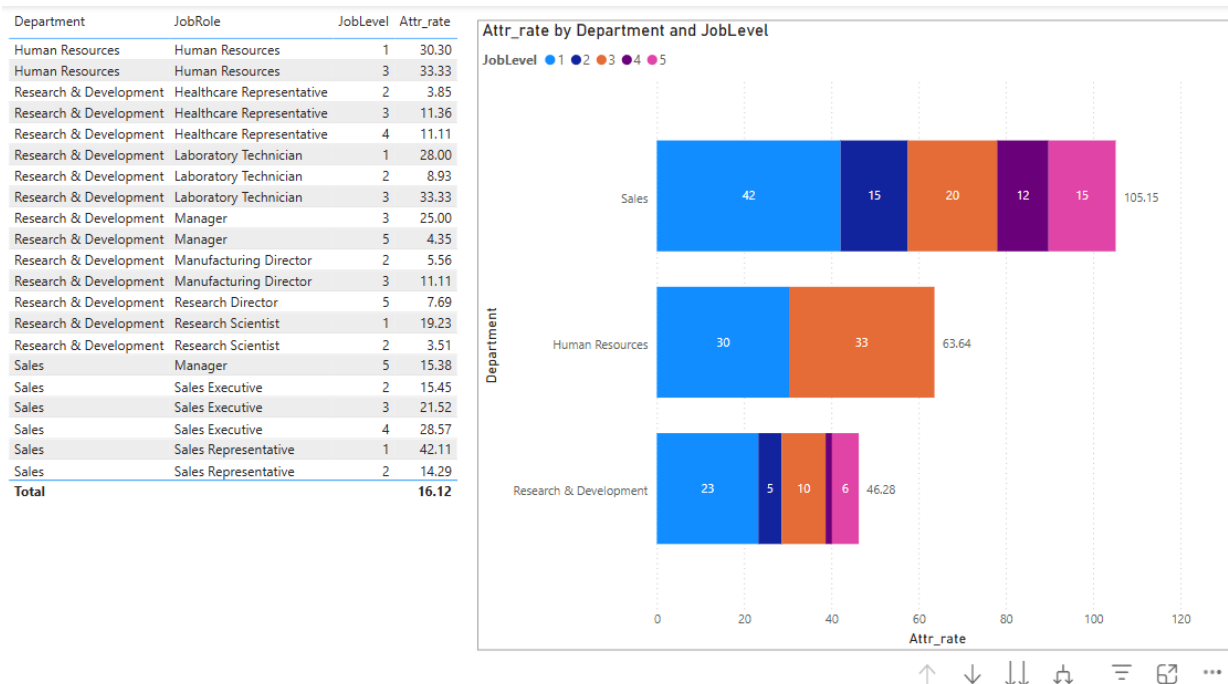
HR department want full employees journey details on factor affect attrition. A full journey report and insights from joining to resignation. The aim is to improve talent retention and manager effectiveness.

Objective

The objective is to study factor like monthly income, job satisfaction, overtime, business travel etc. of employees and present the report , it helps to know the attrition rate in organization and factor related to retain them.

Exploratory Data Analysis

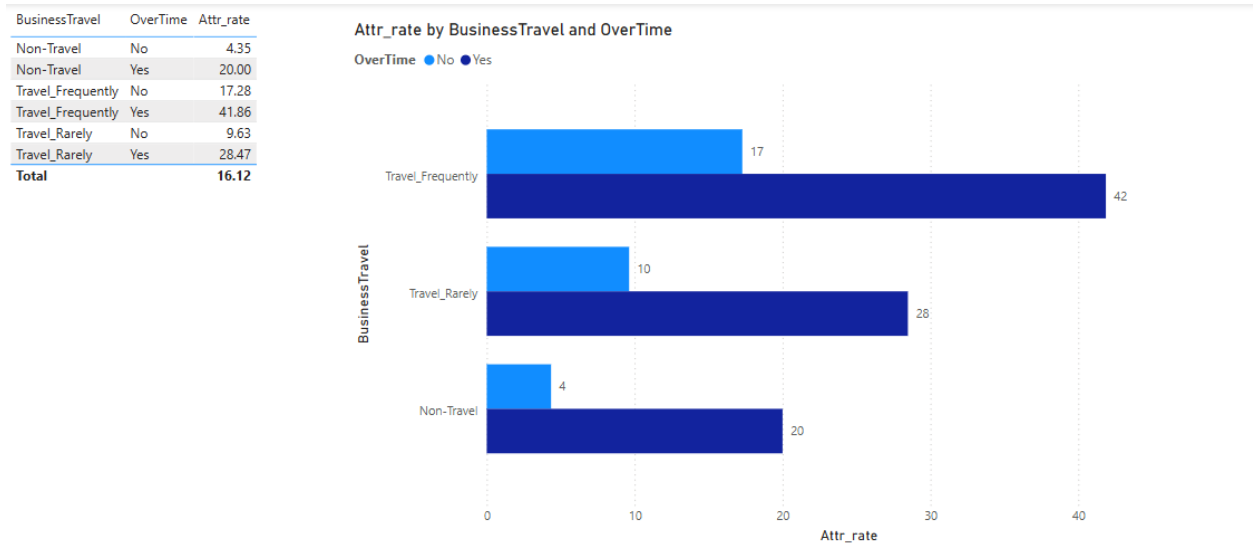
A) Attrition rate by Job level



- 1) We found that sales department overall combination has high Attrition rate of 105.15.
- 2) For Job level 1 in sales department has high Attrition rate of 42.

So, Job level has an effect on attrition, we consider as influential variable for attrition.

B) Attrition rate by Business travel and Overtime

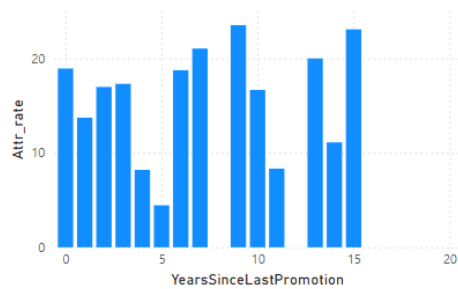


- 1) Frequently Travel has high overall attrition rate as compare to non travel.
- 2) Overtime has high attrition rate e.g. 42 in frequently travel as compare to employee with no overtime .

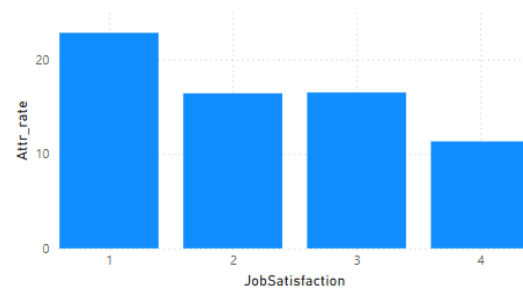
So, Business Travel and Overtime has an effect on attrition, we consider as influential variable for attrition.

C) Top factor effect employee leaves

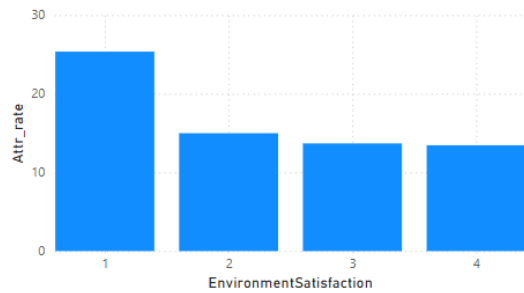
Attr_rate by YearsSinceLastPromotion



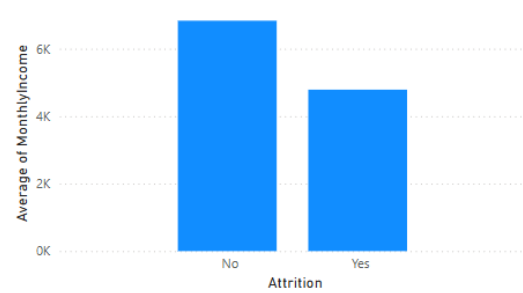
Attr_rate by JobSatisfaction



Attr_rate by EnvironmentSatisfaction



Average of MonthlyIncome by Attrition



- 1) Environment satisfaction, Job satisfaction last year promotion, monthly income, overtime all top factor affect the attrition.
- 2) Environment satisfaction ≤ 2 , Job satisfaction ≤ 2 , last year promotion ≥ 3 , monthly income $< \text{avg}(\text{department wise monthly income})$, overtime are condition to find chance of employee to leave.

Department	JobRole	EnvironmentSatisfaction	JobSatisfaction	YearsSinceLastPromotion	Dep_wise_income	OverTime	Emp_leaving_Chance
Research & Development	Healthcare Representative	1	1	3	4,741.00	Yes	High
Research & Development	Manager	1	2	9	11,849.00	Yes	High
Research & Development	Manufacturing Director	1	1	4	5,980.00	Yes	High
Research & Development	Research Scientist	1	1	6	2,235.00	Yes	High
Research & Development	Research Scientist	1	2	3	2,216.00	Yes	High
Research & Development	Research Scientist	2	1	7	2,559.00	Yes	High
Sales	Sales Executive	1	1	7	5,605.00	Yes	High
Sales	Sales Executive	1	2	10	4,599.00	Yes	High
Sales	Sales Executive	2	2	7	4,779.00	Yes	High
Human Resources	Human Resources	1	2	3	2,592.00	No	Low
Human Resources	Human Resources	2	1	3	10,482.00	No	Low
Human Resources	Manager	1	2	10	18,200.00	No	Low
Research & Development	Healthcare Representative	1	1	12	7,484.00	No	Low
Research & Development	Healthcare Representative	1	2	7	7,441.00	No	Low
Research & Development	Healthcare Representative	2	1	7	4,448.00	No	Low
Research & Development	Healthcare Representative	2	2	4	10,445.00	No	Low
Research & Development	Laboratory Technician	1	1	9	5,210.00	No	Low
Total					8,955.94		

Count of Emp_leaving_Chance by Emp_leaving_Chance



Key influencers Top segments

What influences Attr_rate to ?

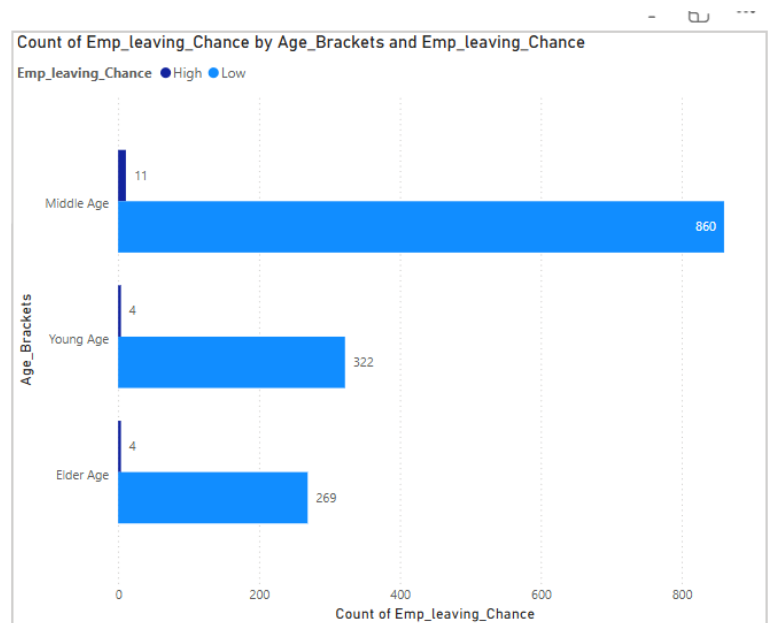


So, Environment satisfaction, Job satisfaction last year promotion, monthly income, overtime has an effect on attrition, we consider as influential variable for attrition.

Here 1.29% employee has higher chance to leave.

D) Age vs risk profile

Age_Brackets	Emp_leaving_Chance	Count of Emp_leaving_Chance
Middle Age	Low	860
Young Age	Low	322
Elder Age	Low	269
Middle Age	High	11
Elder Age	High	4
Young Age	High	4
Total		1470



Here Middle age bracket(30-45) employee has higher chance to leave.

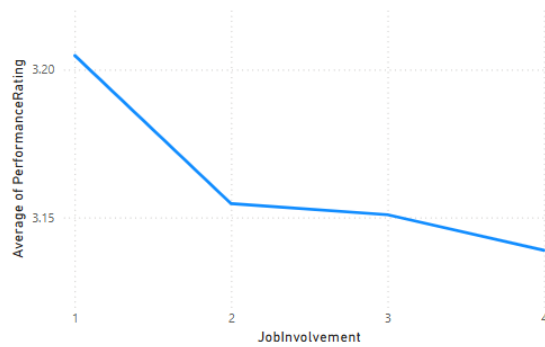
So, age bracket has an effect on attrition, we consider as influential variable for attrition.

E) Performance rating by job involvement or relationship satisfaction

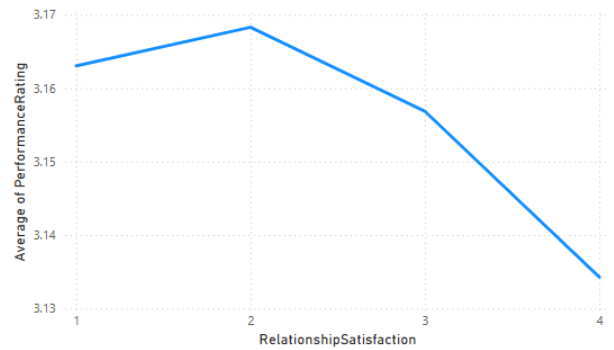
JobInvolvement	Average of PerformanceRating
4	3.14
3	3.15
2	3.15
1	3.20
Total	3.15

RelationshipSatisfaction	Average of PerformanceRating
4	3.13
3	3.16
2	3.17
1	3.16
Total	3.15

Average of PerformanceRating by JobInvolvement

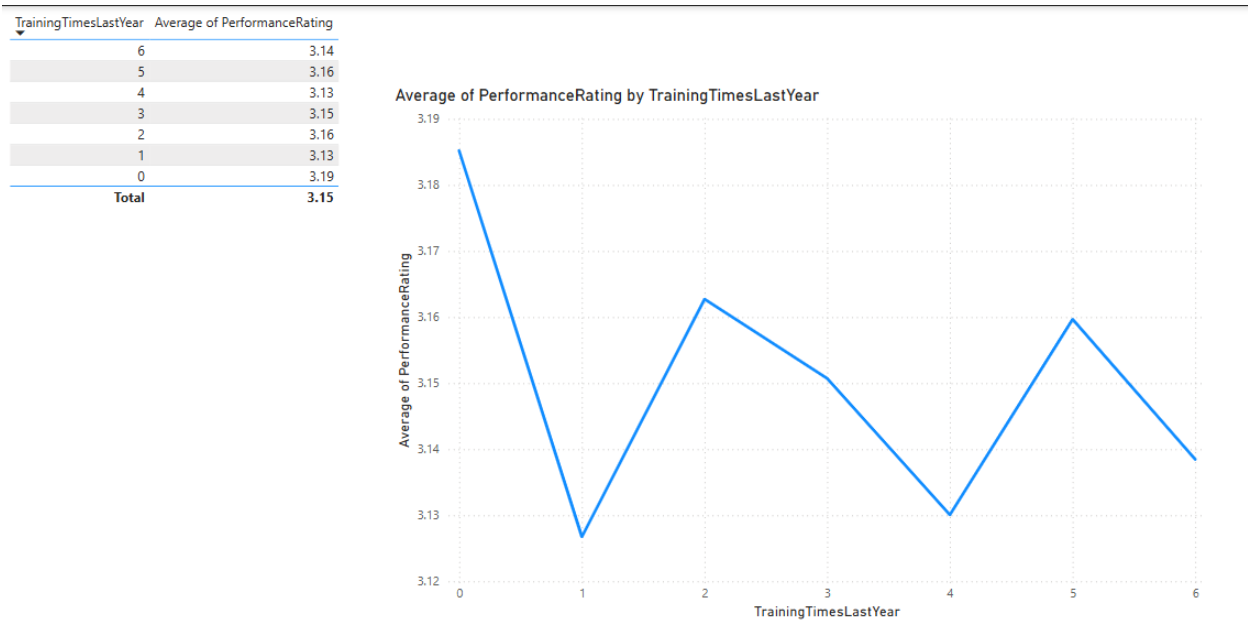


Average of PerformanceRating by RelationshipSatisfaction



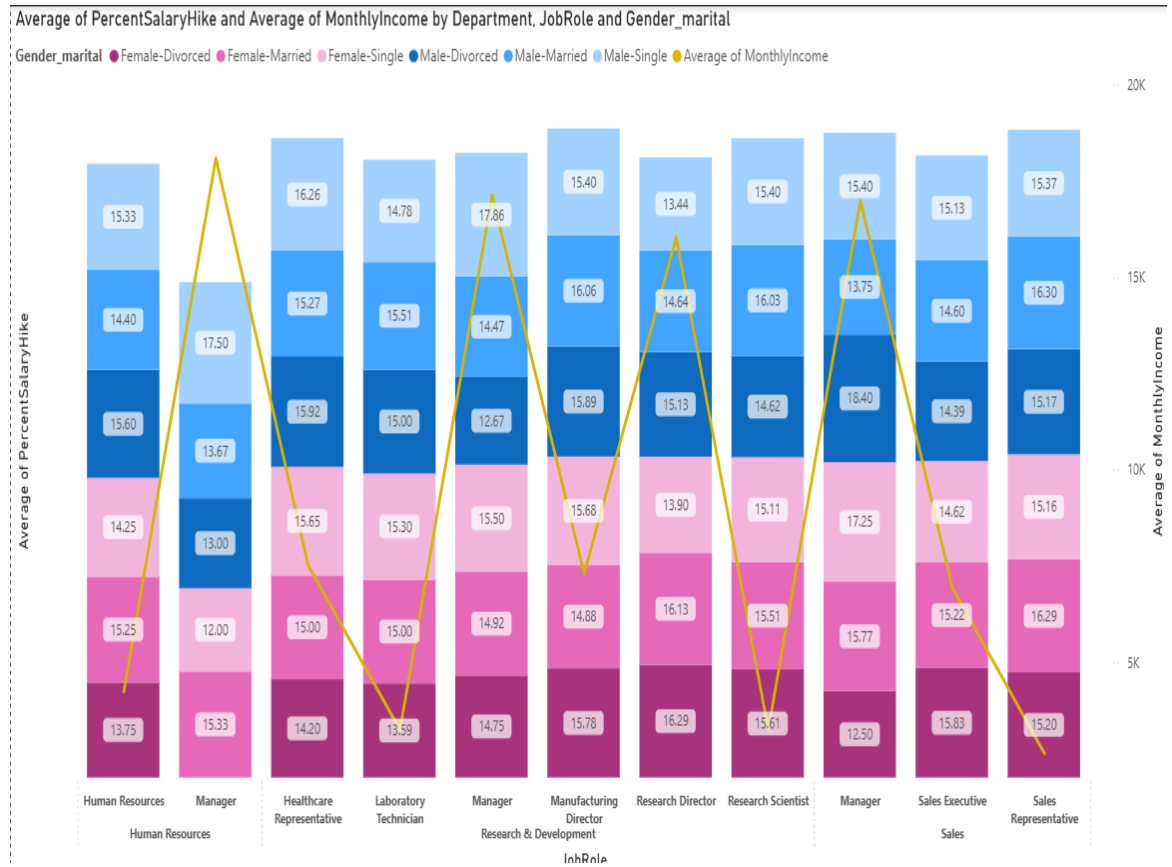
So, Performance rating has an relation job involvement or relationship satisfaction

F) Performance rating by training time last year



So, training time last year has relation with performance rating.

G) Job role and joblevel by income and salary hike by gender and marital status.



- 1) There is strong relation between Job role and joblevel by income and salary hike by gender and marital status category
- 2) Combine categories gender and marital status for better insights.
- 3) Divorced –Male, Manager level has high monthly income and salary hike.

H) Monthly income by promotion years and working experience years

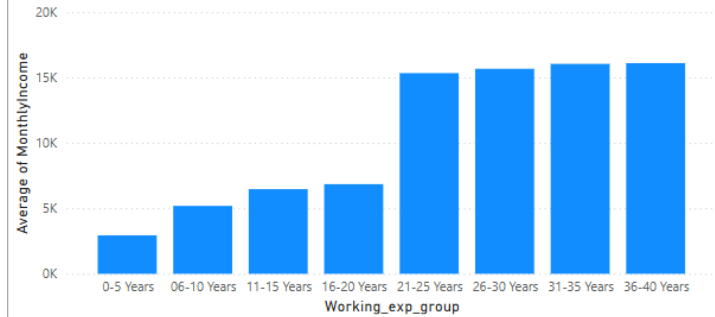
Promotion_group	Average of MonthlyIncome
13-15 Years	14250.69
10-12 Years	11655.65
04-6 Years	8589.08
07-9 Years	7506.15
0-3 Years	5760.30
Total	6502.93

Average of MonthlyIncome by Promotion_group



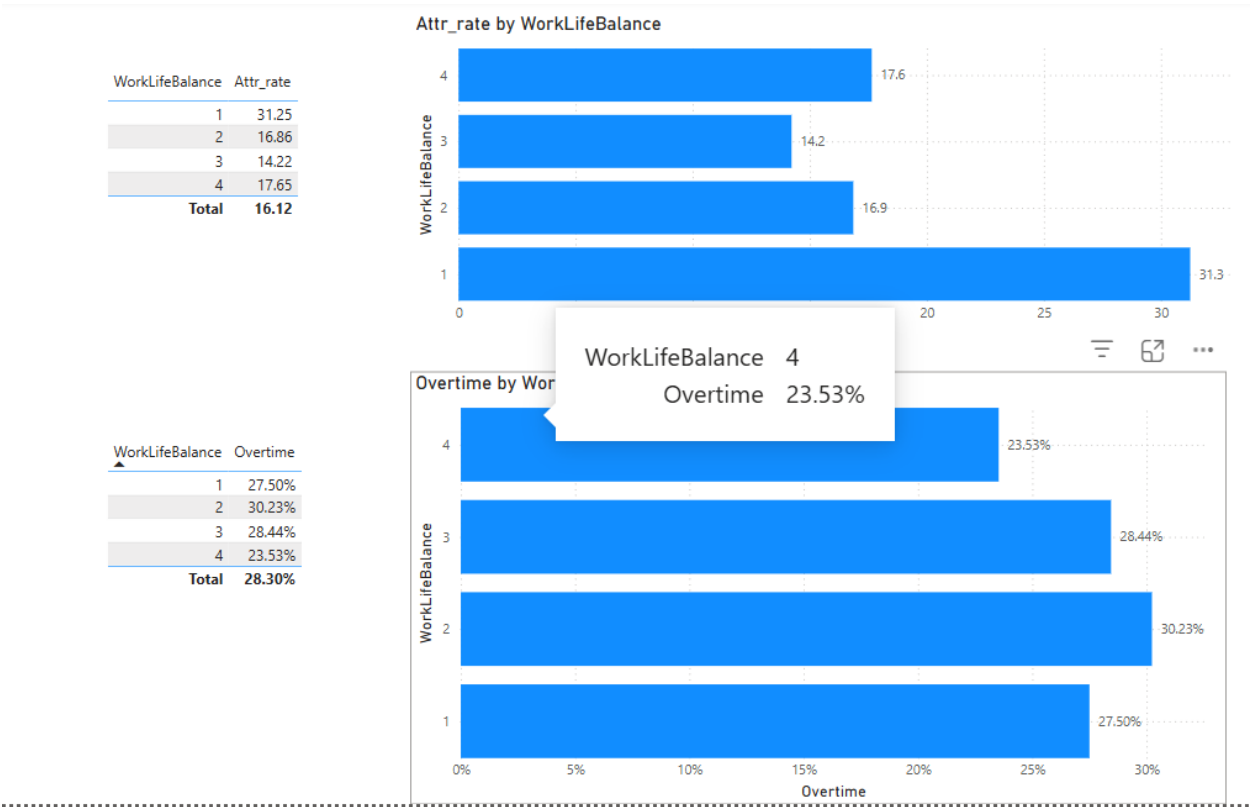
Working_exp_group	Average of MonthlyIncome
0-5 Years	2937.63
06-10 Years	5189.75
11-15 Years	6469.10
16-20 Years	6848.85
21-25 Years	15334.02
26-30 Years	15667.81
31-35 Years	16040.27
36-40 Years	16100.23
Total	6502.93

Average of MonthlyIncome by Working_exp_group



As increase with working experience years and promotion years , monthly salary is also increases.

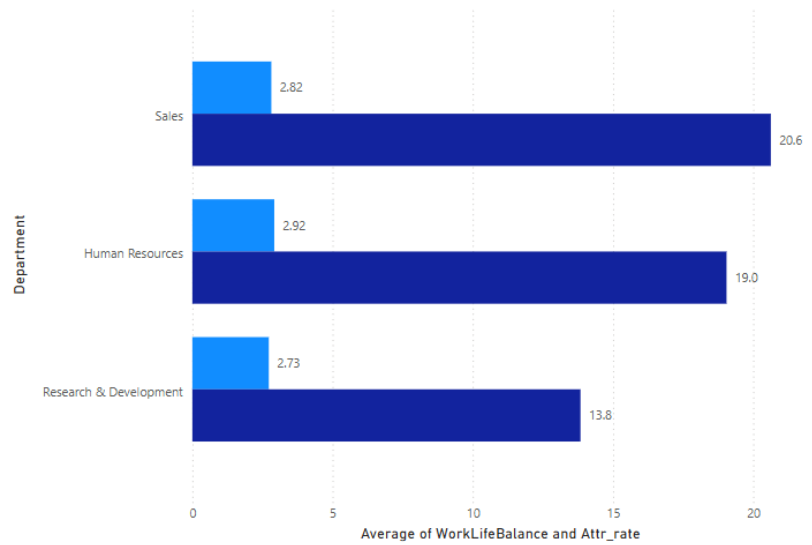
I) Working life balance by overtime and attrition rate, department.



Department	WorkLifeBalance	Attr_rate
Sales	1	37.50
Research & Development	1	31.67
Human Resources	2	28.57
Sales	2	23.53
Sales	4	23.08
Human Resources	3	21.43
Sales	3	18.12
Research & Development	4	15.38
Research & Development	2	13.62
Research & Development	3	11.83
Human Resources	4	10.00
Total		16.12

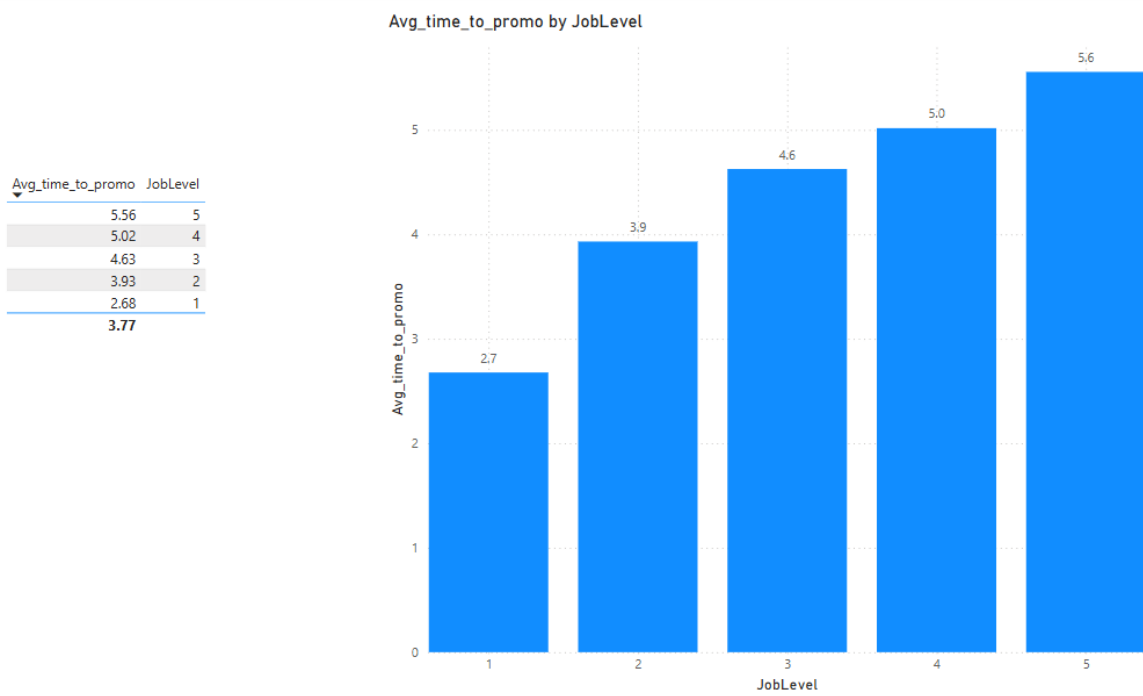
Average of WorkLifeBalance and Attr_rate by Department

● Average of WorkLifeBalance ● Attr_rate



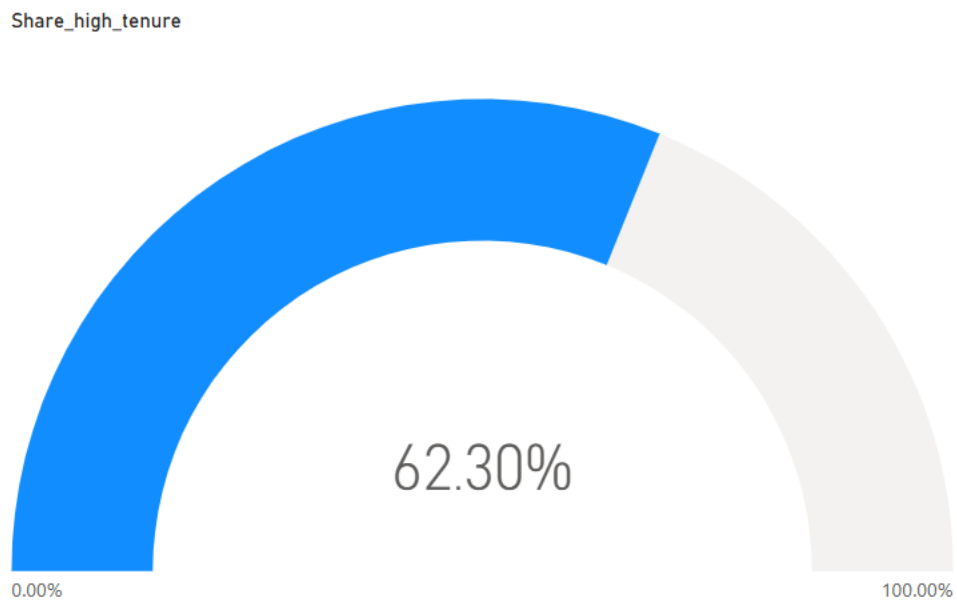
So there is relation between working life balance by overtime, attrition rate and department

J) Promotion by Job level.



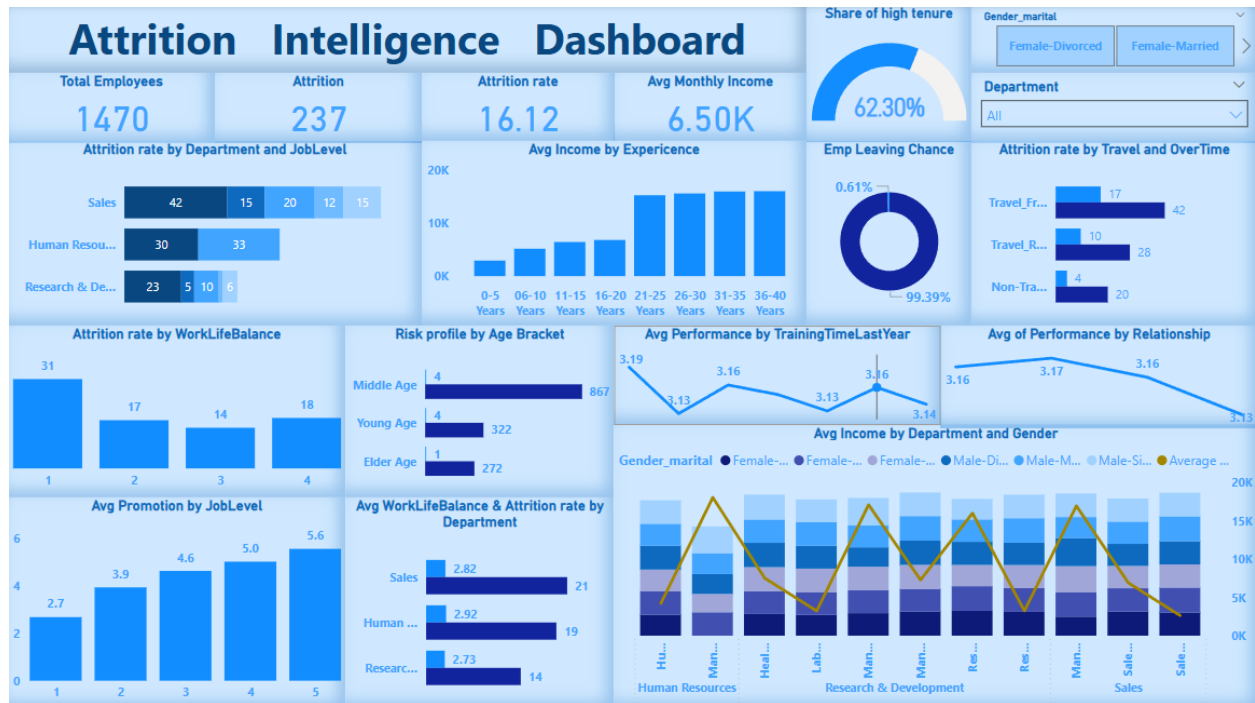
So, job level 5 has higher promotion.

H) High tenure employee with salary hike and promotions.



High tenure employee with salary hike of 62.30% and promotions.

DashBoard



Suggestions

- 1) Improve job satisfaction and environment satisfaction
- 2) Improve promotion for pending employee promotion from last years
- 3) Improve department and joblevel by monthly income.