

## Attrition Intelligence Dashboard

### Problem Statement

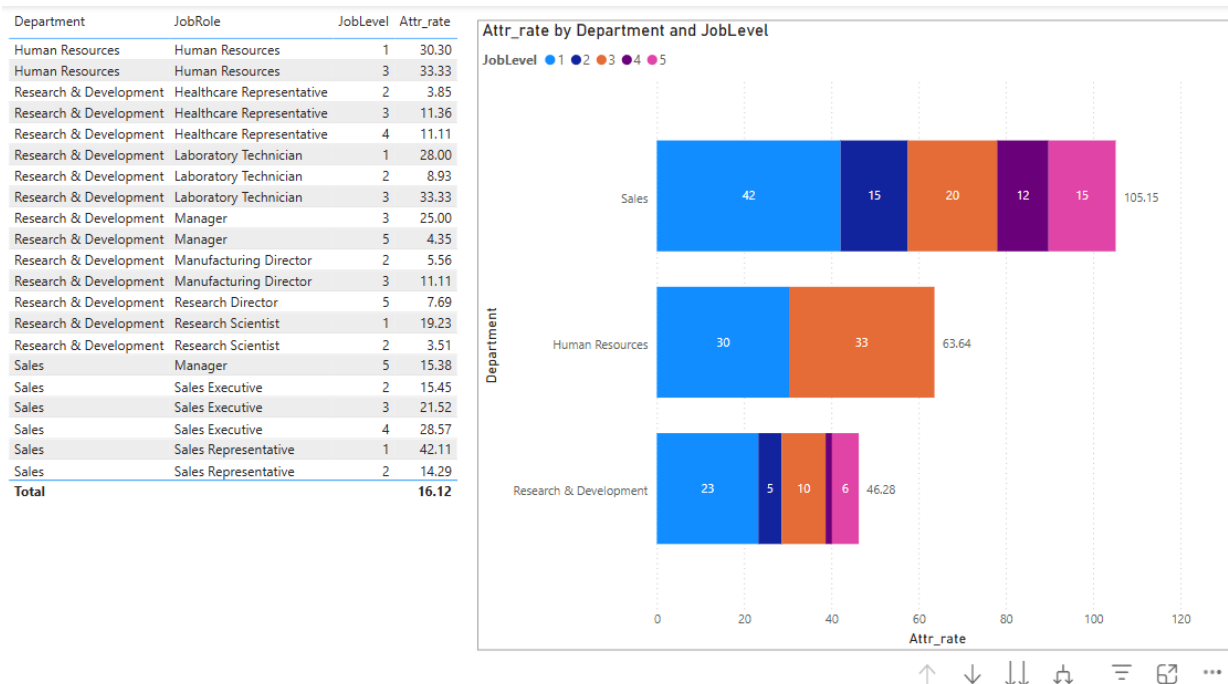
HR department want full employees journey details on factor affect attrition. A full journey report and insights from joining to resignation. The aim is to improve talent retention and manager effectiveness.

### 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

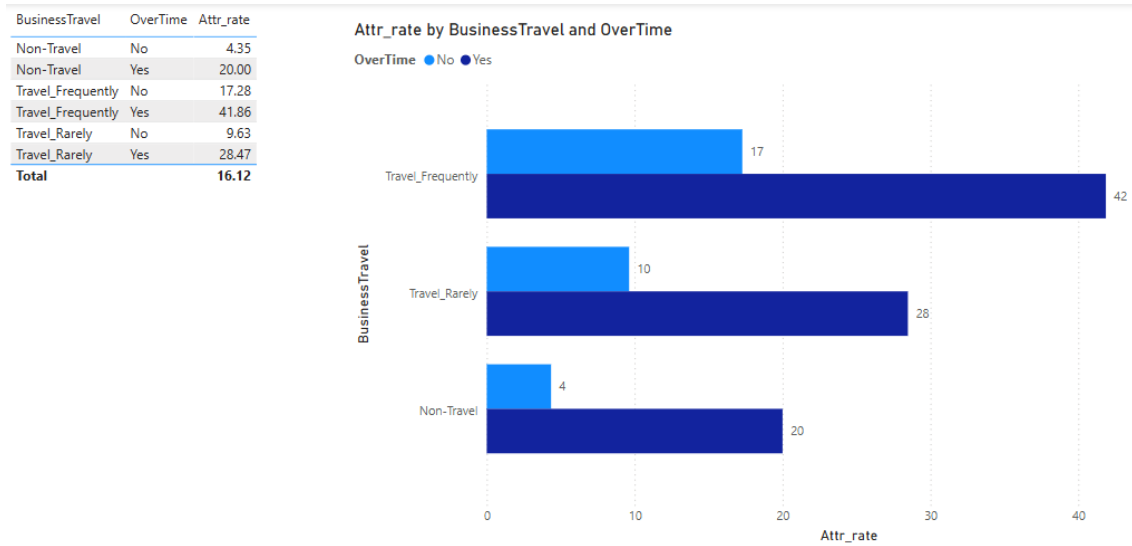
#### A) Attrition rate by Job level



- 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

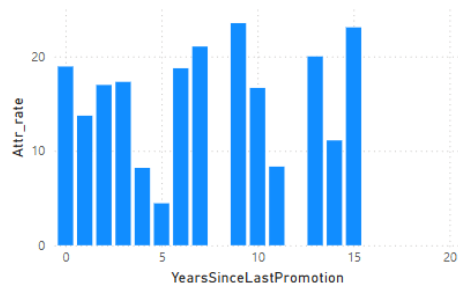


- 1) Frequently Travel has high overall attrition rate as compare to non travel.
- 2) Overtime has high attrition rate e.g. 42 in frequently travel as compare to employee with no overtime .

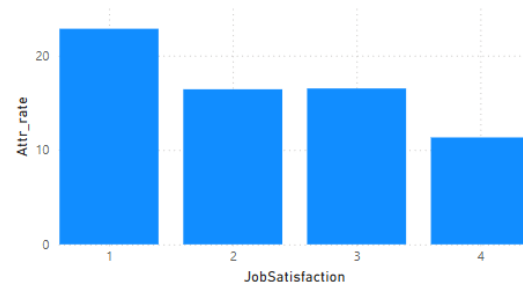
So, Business Travel and Overtime has an effect on attrition, we consider as influential variable for attrition.

## C) Top factor effect employee leaves

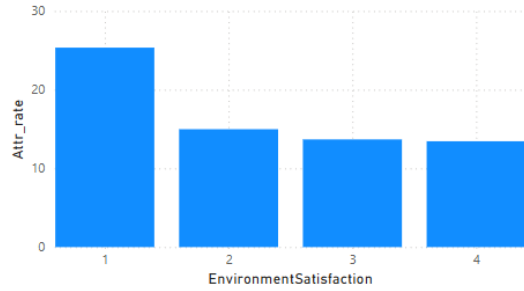
Attr\_rate by YearsSinceLastPromotion



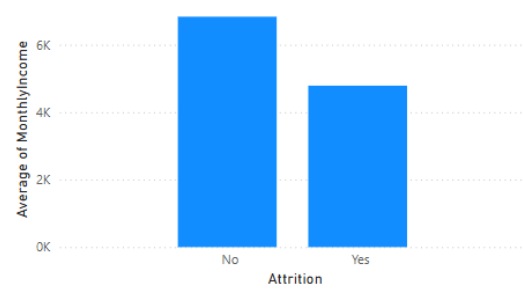
Attr\_rate by JobSatisfaction



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  $\leq 2$ , Job satisfaction  $\leq 2$ , last year promotion  $\geq 3$ , monthly income  $<$  avg(department wise monthly income), overtime are condition to find chance of employee to leave.

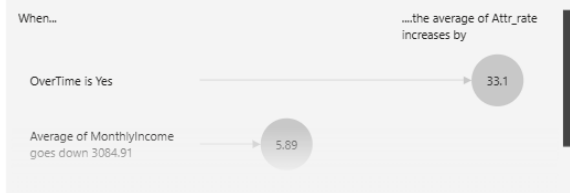
Department	JobRole	EnvironmentSatisfaction	JobSatisfaction	YearsSinceLastPromotion	Dep_wise_income	OverTime	Emp_leaving_Chance
Research & Development	Healthcare Representative	1	1	3	4,741.00	Yes	High
Research & Development	Manager	1	2	9	11,849.00	Yes	High
Research & Development	Manufacturing Director	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
<b>Total</b>					<b>8,955.94</b>		

Count of Emp\_leaving\_Chance by Emp\_leaving\_Chance



Key influencers Top segments

What influences Attr\_rate to  ?



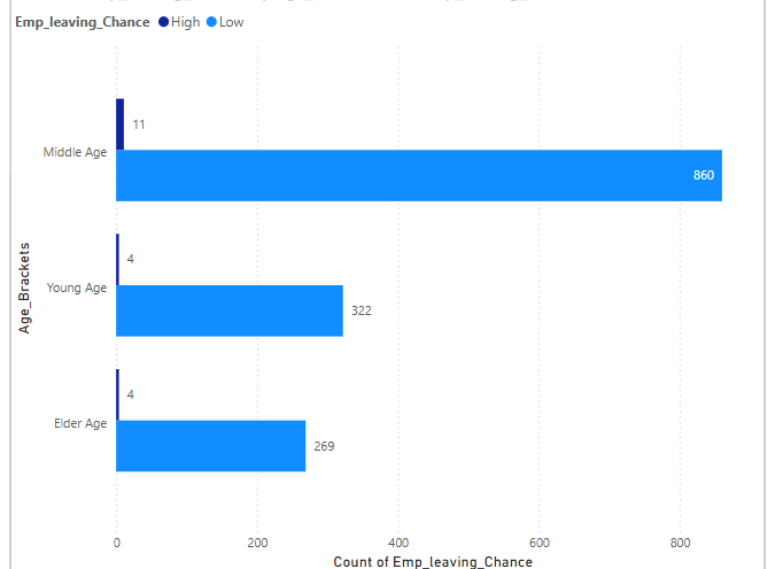
So, Environment satisfaction, Job satisfaction last year promotion, monthly income, overtime has an effect on attrition, we consider as influential variable for attrition.

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
<b>Total</b>		<b>1470</b>

Count of Emp\_leaving\_Chance by Age\_Brackets and Emp\_leaving\_Chance



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

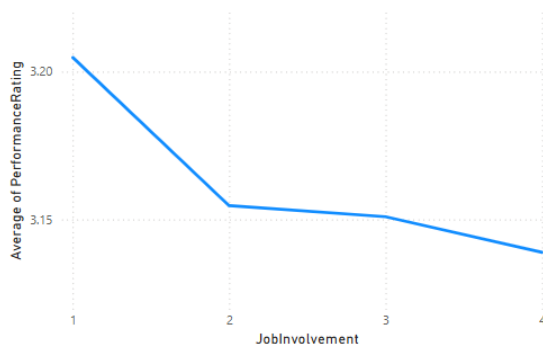
So, age bracket has an effect on attrition, we consider as influential variable for attrition.

### E) Performance rating by job involvement or relationship satisfaction

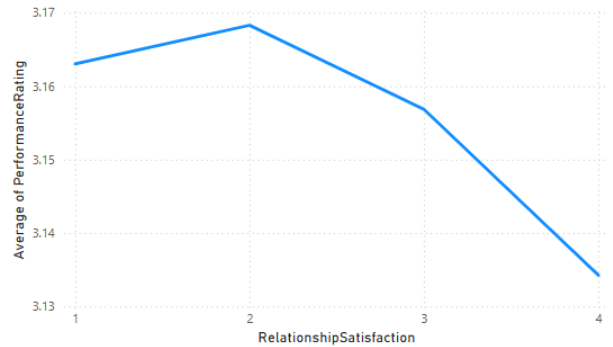
JobInvolvement	Average of PerformanceRating
4	3.14
3	3.15
2	3.15
1	3.20
Total	3.15

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

Average of PerformanceRating by JobInvolvement



Average of PerformanceRating by RelationshipSatisfaction

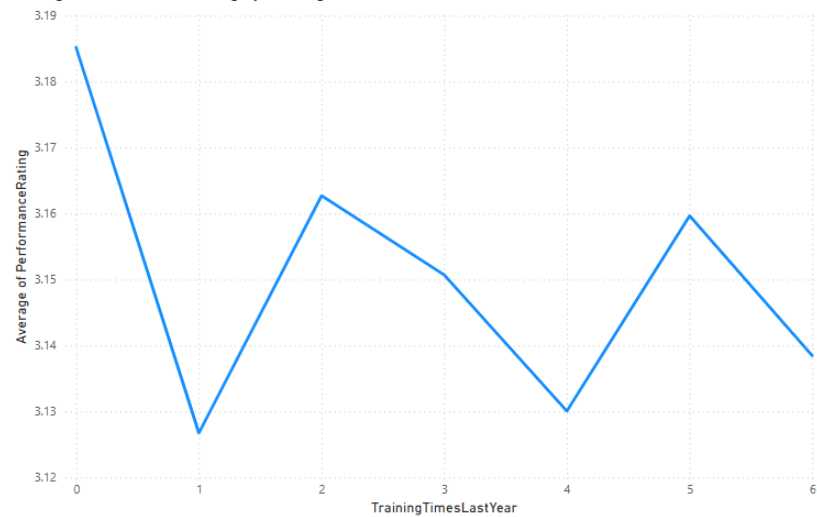


So, Performance rating has an relation job involvement or relationship satisfaction

### F) Performance rating by training time last year

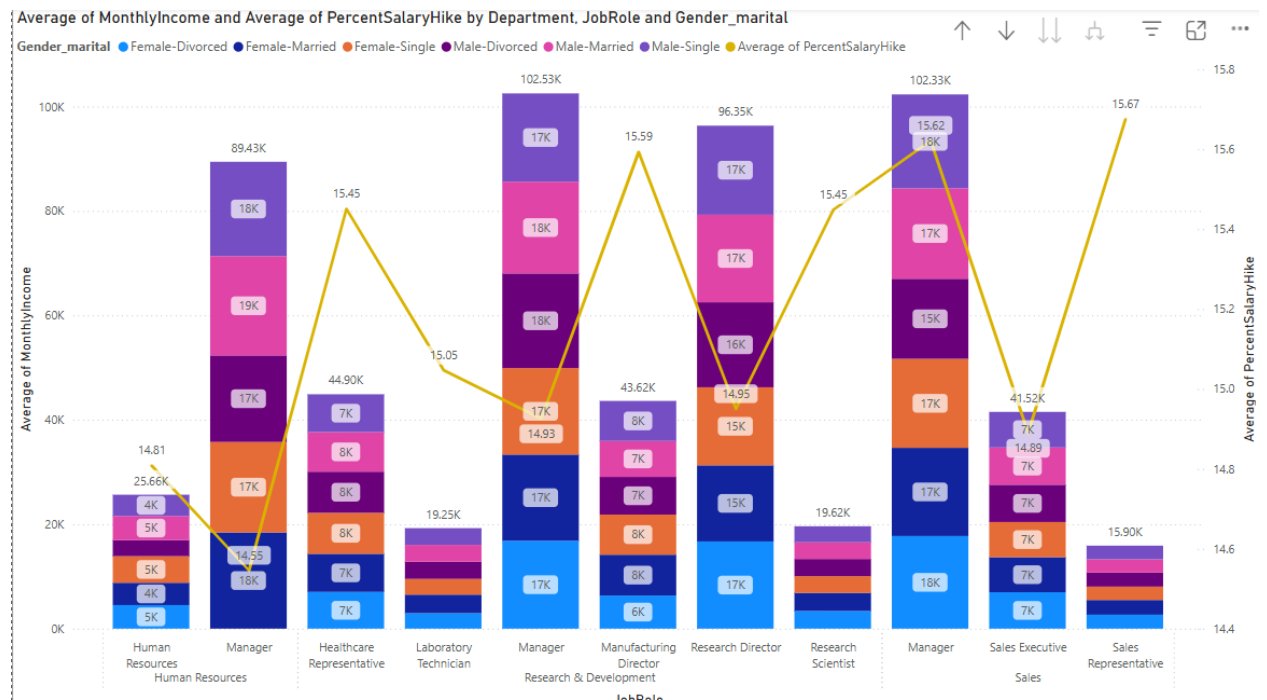
TrainingTimesLastYear	Average of PerformanceRating
6	3.14
5	3.16
4	3.13
3	3.15
2	3.16
1	3.13
0	3.19
Total	3.15

Average of PerformanceRating by TrainingTimesLastYear



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.



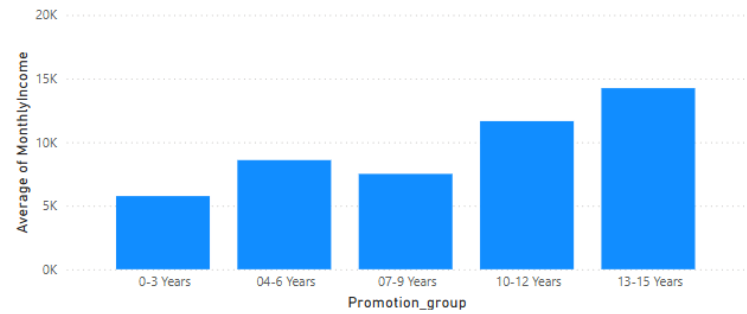
- 1) There is strong relation between Job role and joblevel by income and salary hike by gender and marital status category

- 2) Combine categories gender and marital status for better insights.
- 3) Single –Male, Manager level has high monthly income and salary hike.

#### H) Monthly income by promotion years and working experience years

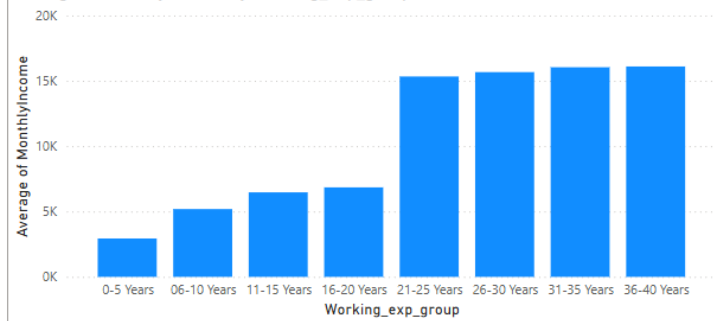
Promotion_group	Average of MonthlyIncome
13-15 Years	14250.69
10-12 Years	11655.65
04-6 Years	8589.08
07-9 Years	7506.15
0-3 Years	5760.30
<b>Total</b>	<b>6502.93</b>

Average of MonthlyIncome by Promotion\_group



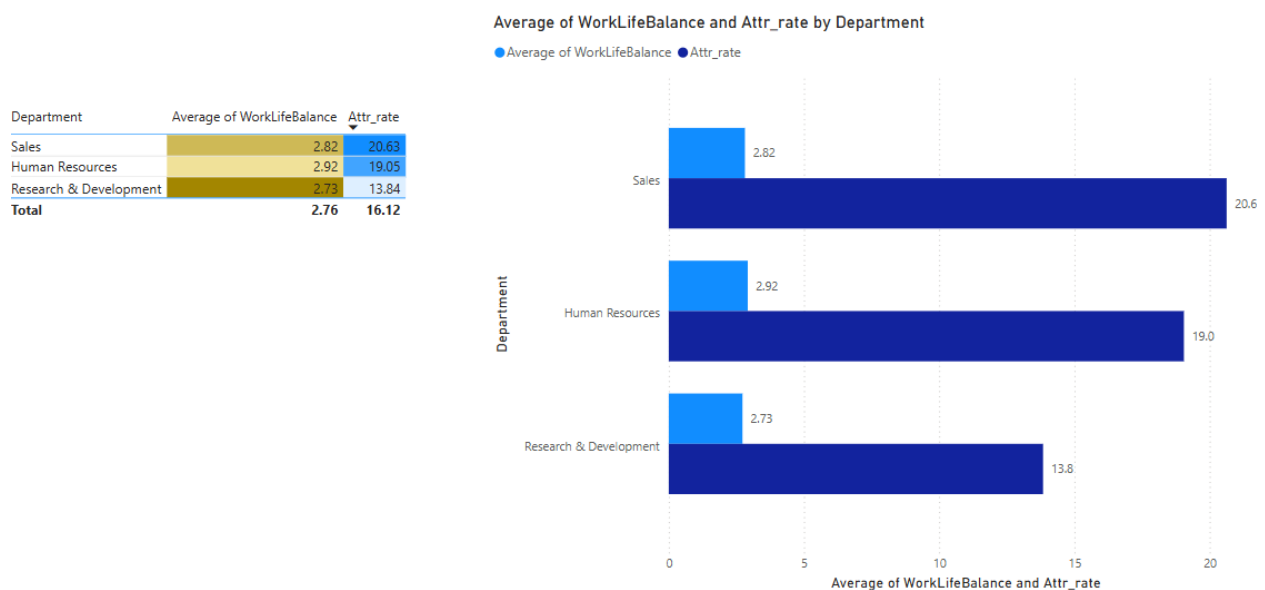
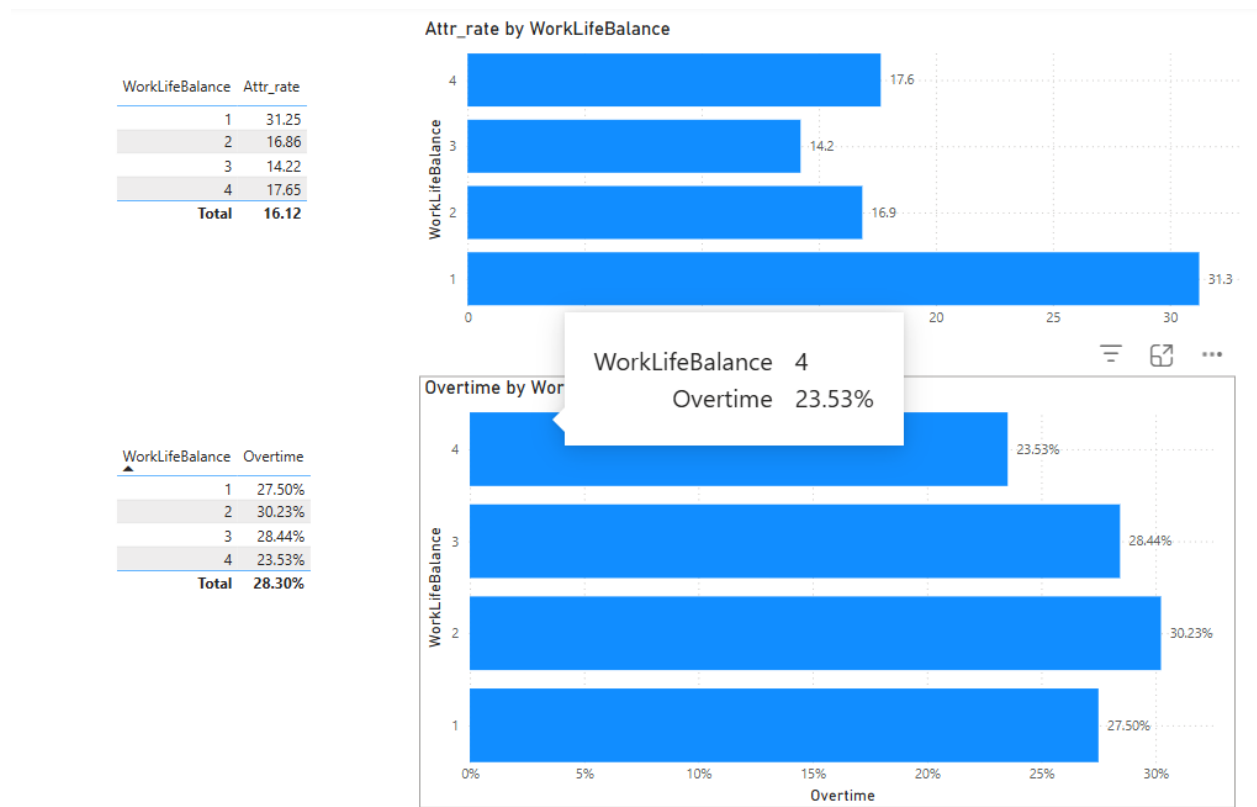
Working_exp_group	Average of MonthlyIncome
0-5 Years	2937.63
06-10 Years	5189.75
11-15 Years	6469.10
16-20 Years	6848.85
21-25 Years	15334.02
26-30 Years	15667.81
31-35 Years	16040.27
36-40 Years	16100.23
<b>Total</b>	<b>6502.93</b>

Average of MonthlyIncome by Working\_exp\_group



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

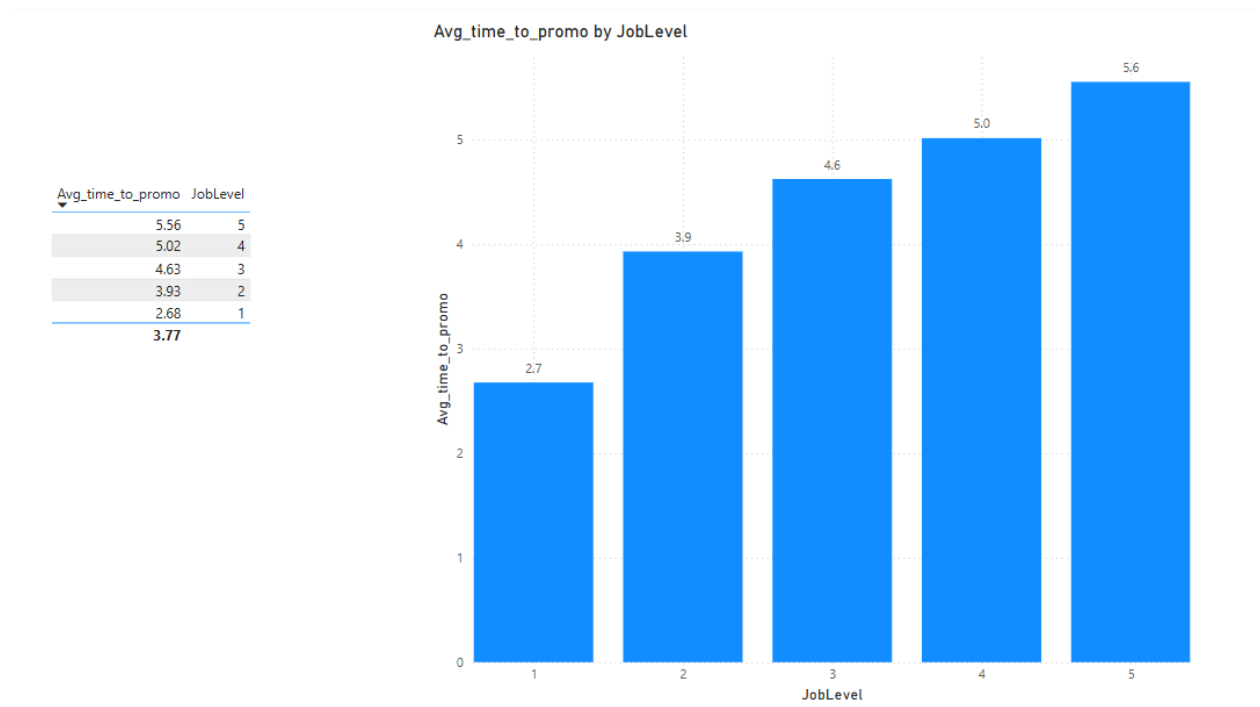
#### I) Working life balance by overtime and attrition rate, department.



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

## J) Promotion by Job level.

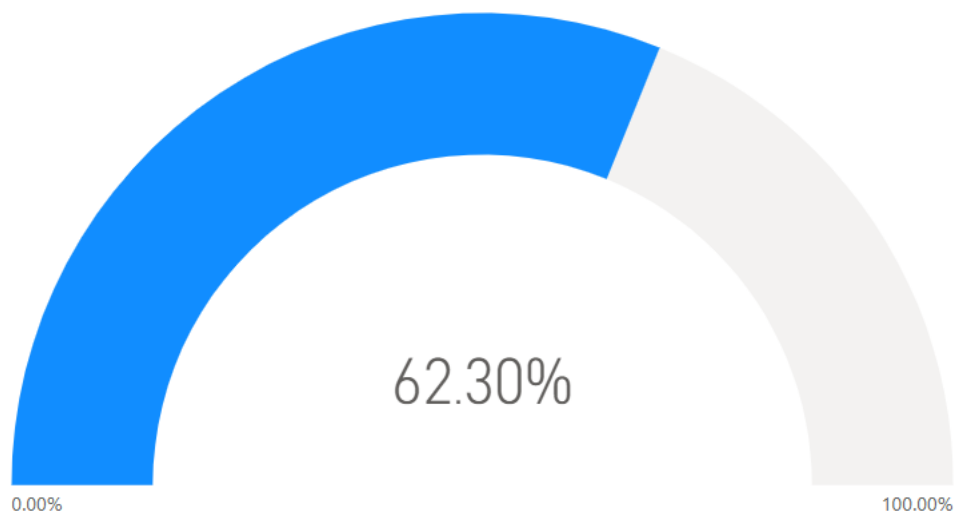




So, job level 5 has higher promotion.

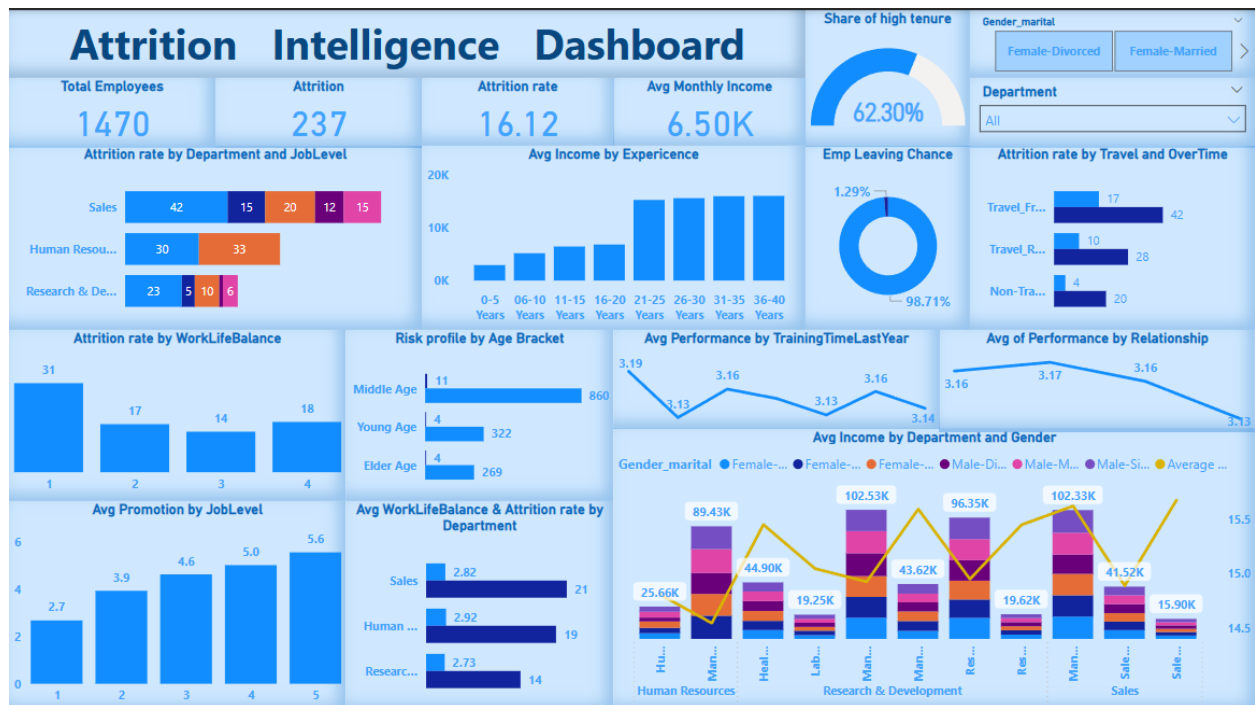
**H) High tenure employee with salary hike and promotions.**

Share\_high\_tenure



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.