Employee Attrition Analysis

Trends and challenges

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Employee Attrition

Attrition

Introduction to results analysis

The primary objective of this project is to analyze employee attrition within our organization using data-driven insights. By examining factors such as demographics, job-related variables, and satisfaction levels, we aim to understand the reasons behind employee turnover. The project seeks to identify trends, patterns, and correlations within the dataset to provide actionable recommendations for improving employee retention and organizational success.
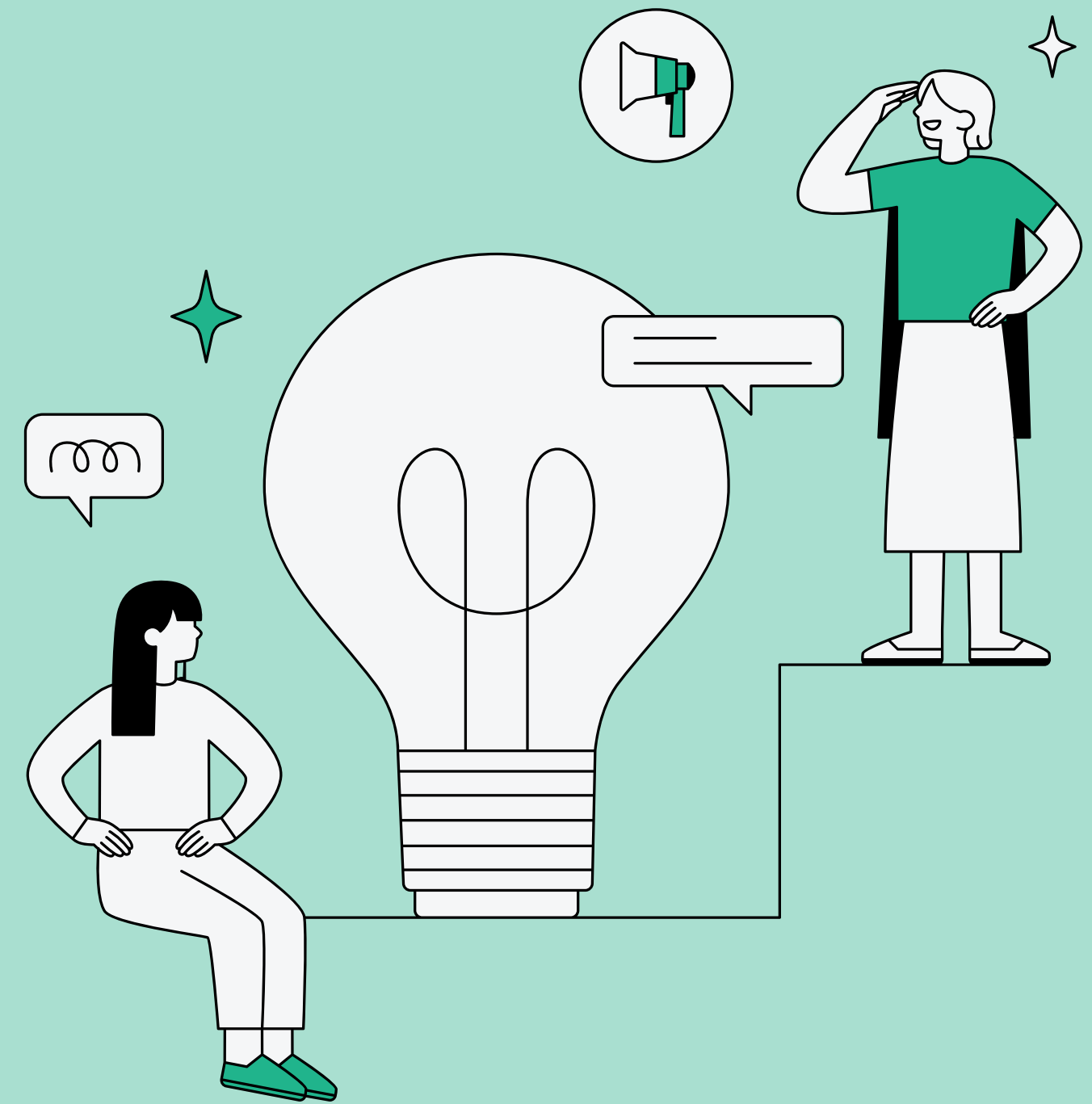
Overview

This dataset includes data such as employee age, gender, marital status, job role, monthly income, years at the company, performance ratings, and more.
Studying employee attrition trends is crucial for several reasons. it provides insights into the overall health of our workforce and organizational culture. By identifying patterns and trends in attrition, we can make informed decisions and enhance employee satisfaction and engagement.

Methodology:

The methodology consists of several steps, including data preparation, exploratory data analysis.
The analysis is conducted using Power BI and Excel.
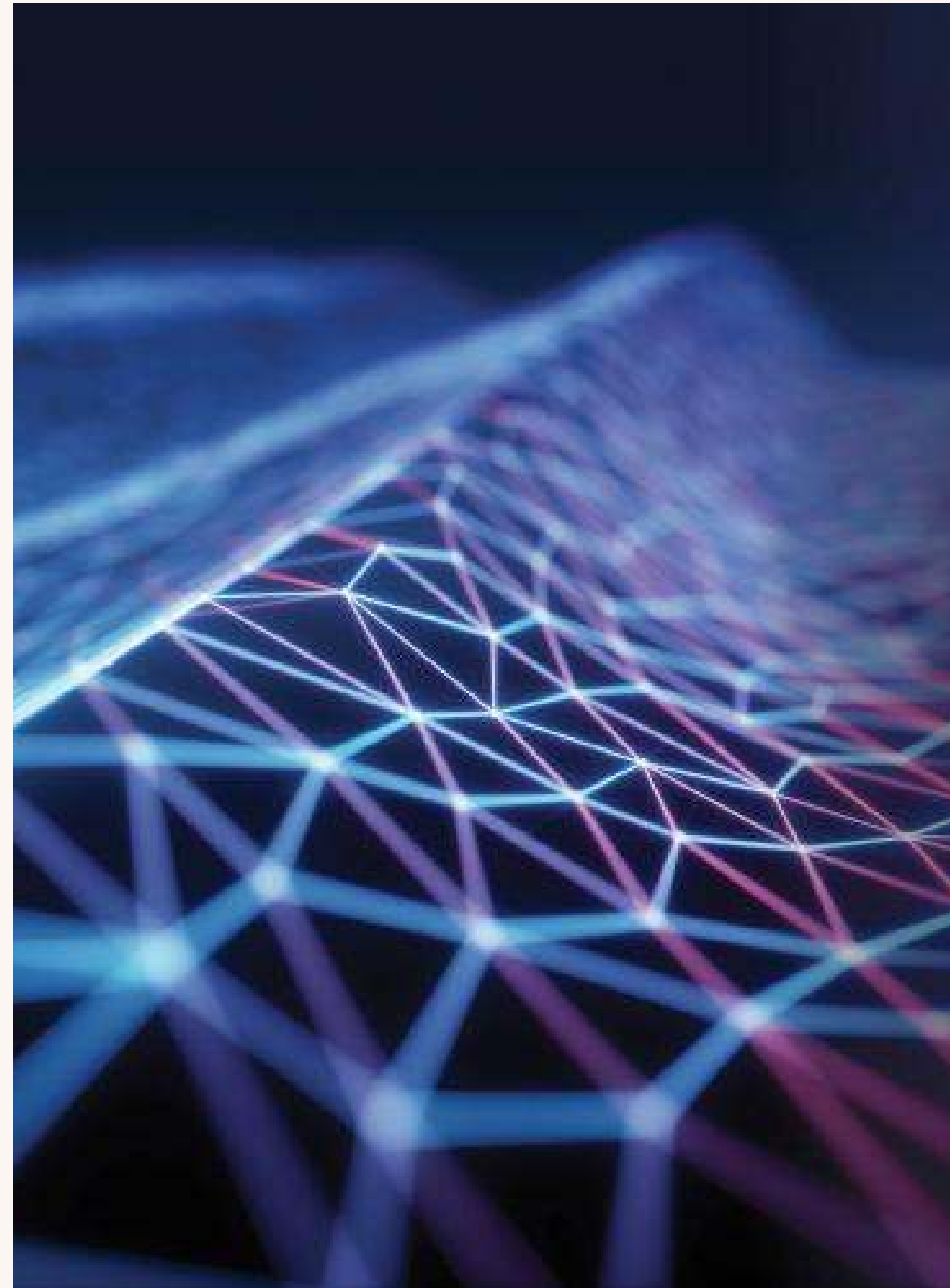
Total Employee And Attrition Rate,

Attrition Rate: The attrition Rate means "Employee % who have left the company".

There Were Total **4410** **Employee** in Organization and **16.12%** left the company and This **16.12%** is Attrition Rate. The attrition rate is calculated by dividing the count of employees who left by the total count of employees.

Attrition rate Formulla:

Attrition Rate = VAR TotalEmployee = SUM('AttritionCounts'[Count])
VAR leftemployee = CALCULATE(SUM('AttritionCounts'[Count]),'AttritionCounts'[Attrition]="Yes")
RETURN
IF(ISBLANK(TotalEmployee),BLANK(),(leftemployee/TotalEmployee)*100)

Total Employee

4410

Attrition Rate %

16.12

15

10

5

0

High Attrition Rate
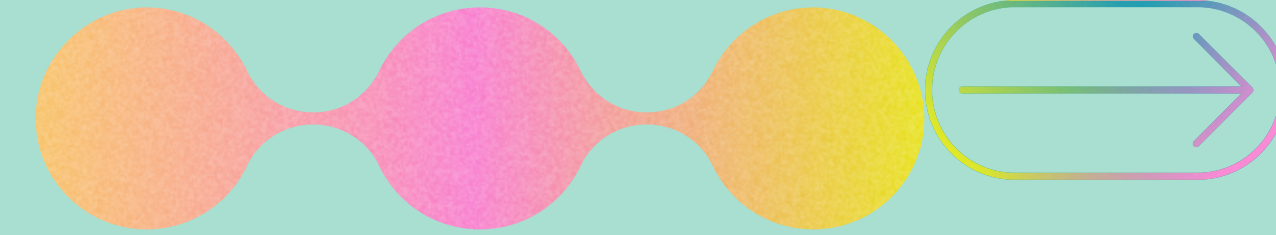
Employee Count Over Attrition

There are total of 4410 employees in organization. 711 employees left the organization, and 3699 employees are working till now.

Employee Count by Attrition

711 (16.12%)

3699 (83.88%)
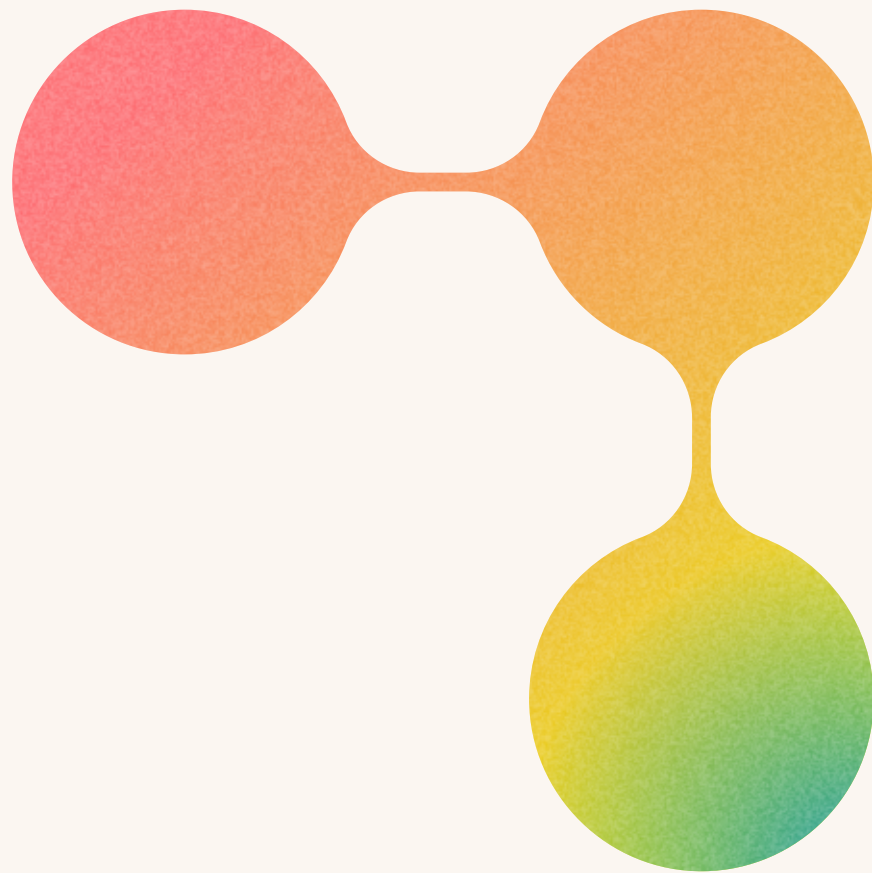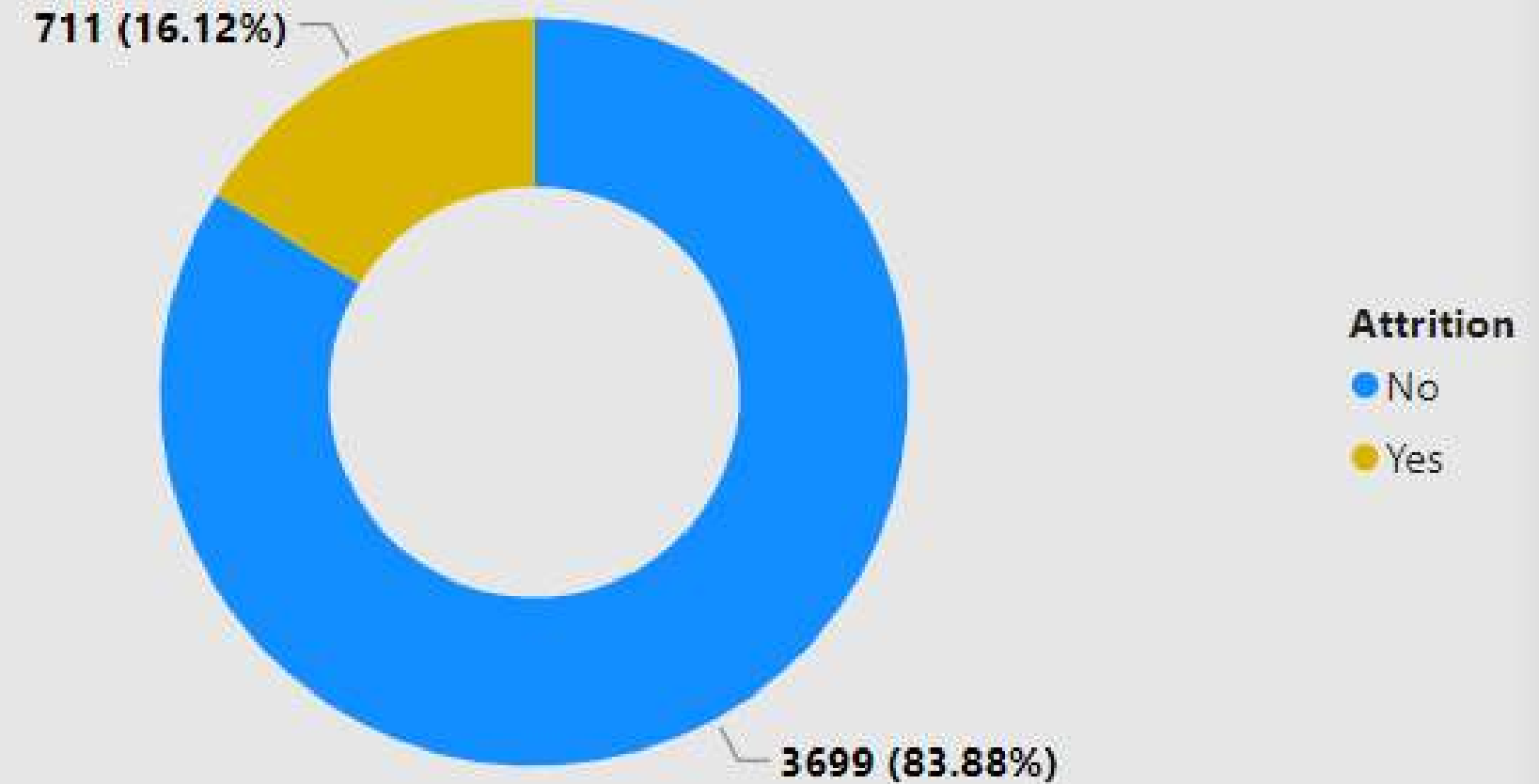
Attrition
- No
- Yes

Attrition Count Over Department and job Role

Certain job roles, such as Sales Executive, Research Scientist have higher attrition rates compared to others. This insight highlights the importance of assessing job satisfaction and career development opportunities for employees in critical roles.
Attrition rates vary across departments, with the highest rates observed in Research and development. Understanding department-specific attrition trends can help identify areas for targeted interventions.
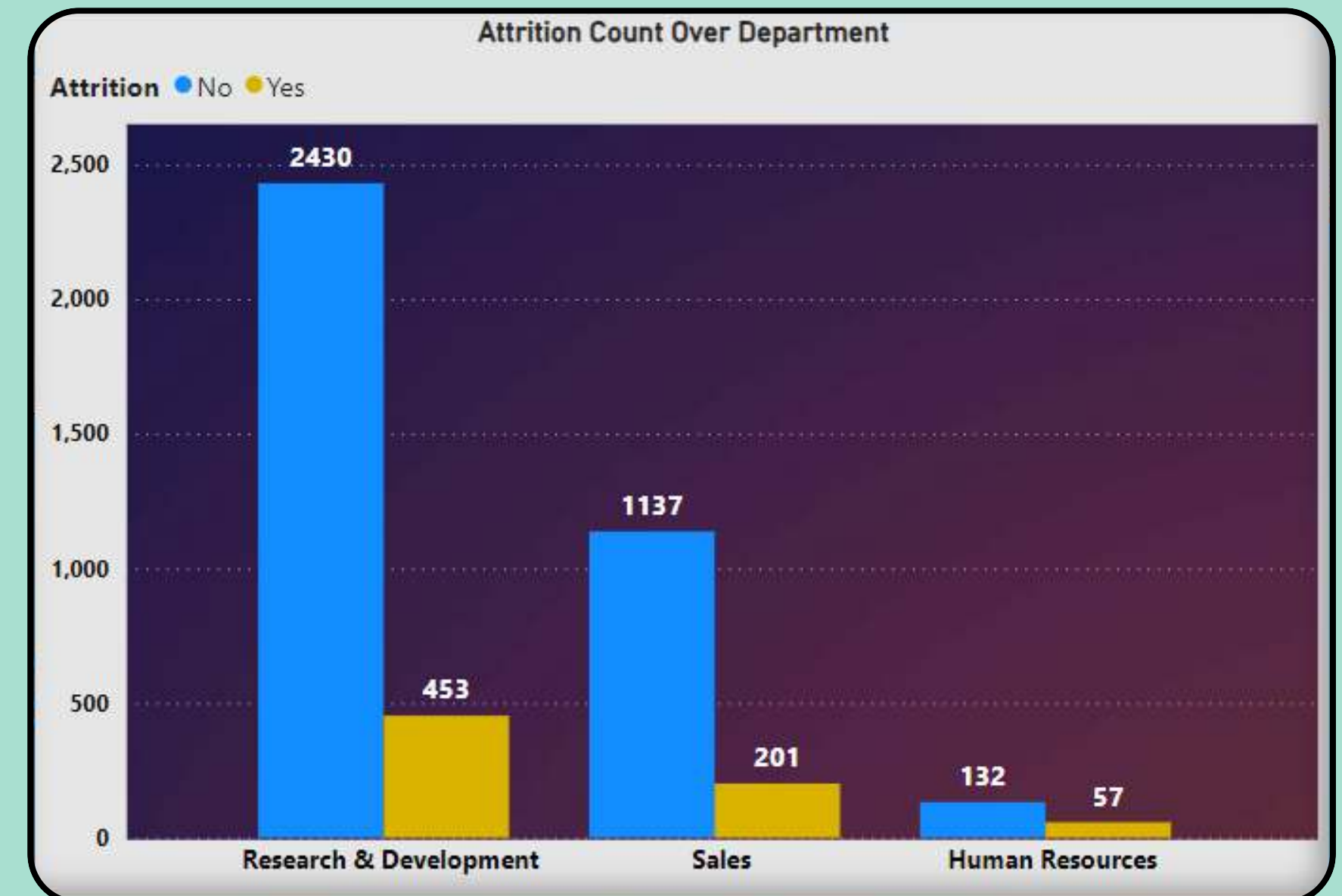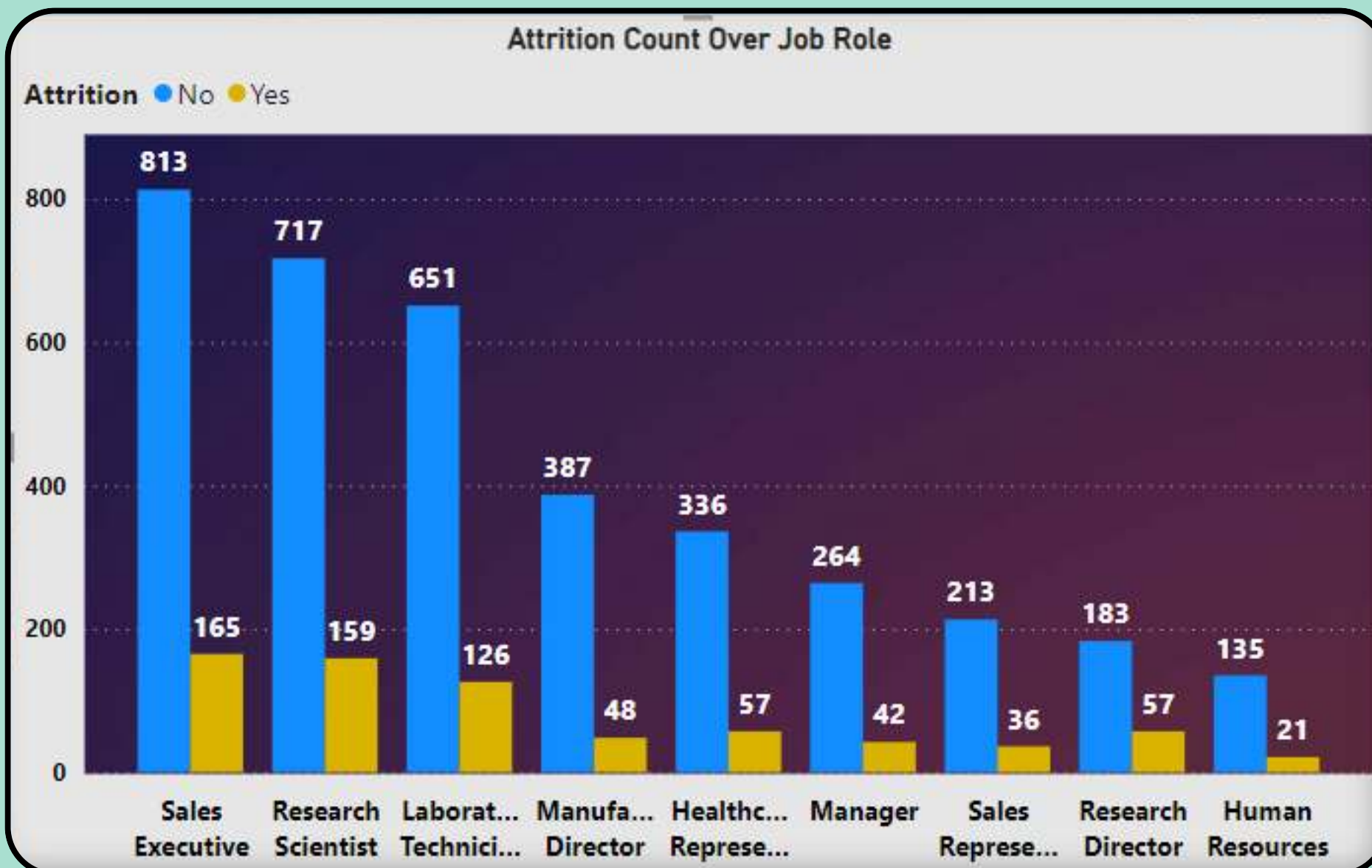
Attrition Count Over Gender and business travel

We can see that which gender and business travel is on the top based on attrition.
in below charts we can see that 441 male and 270 female left the job and 468 employee in travel_rarely and 207 in travel_frequently frequently left the job.
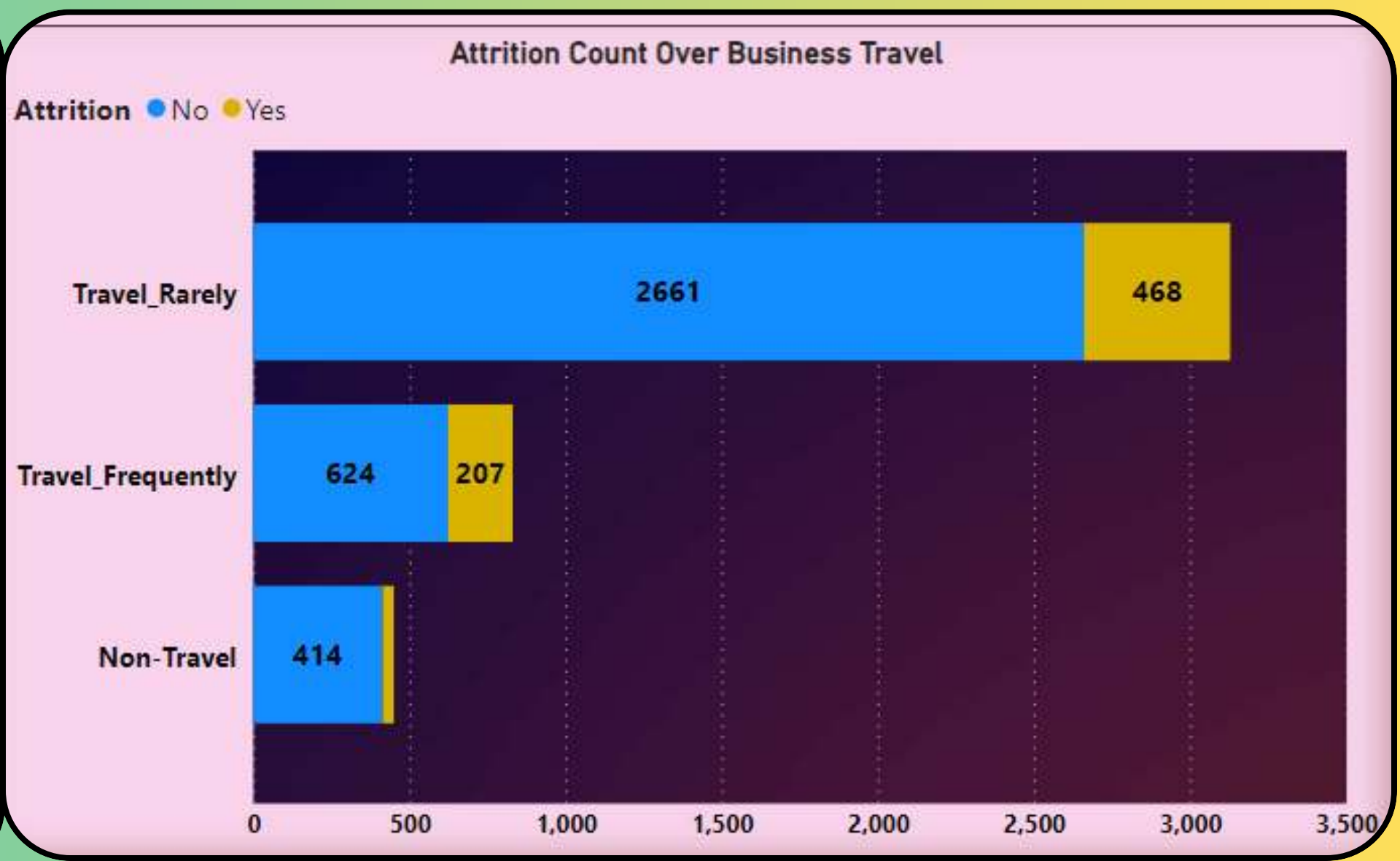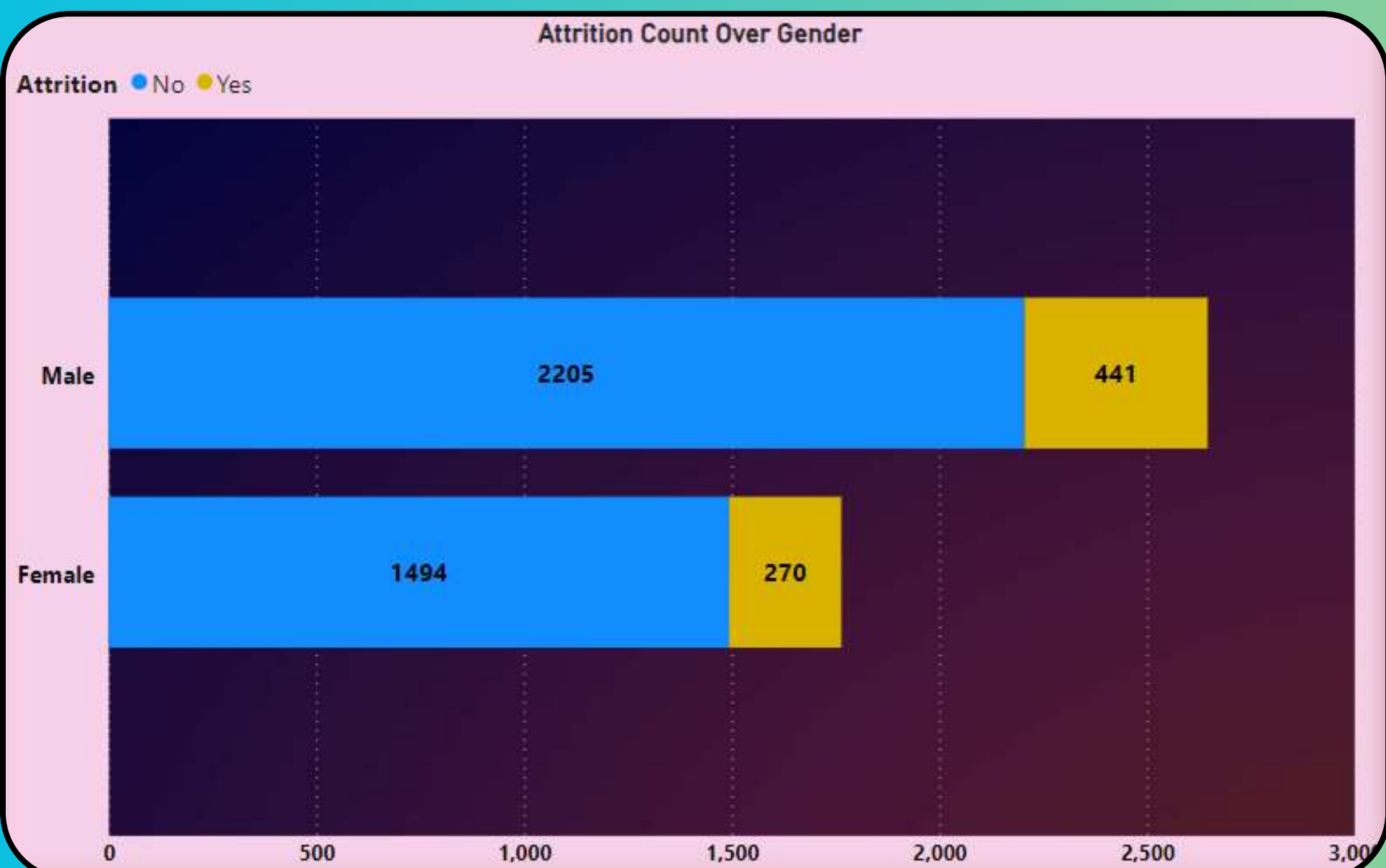
:Attrition Count over marital status:

Mostly employee (252) who are single left the job. and second who are married (252) left the job.

Count of Attrition by MaritalStatus and Attrition

Attrition ● No ● Yes

MaritalStatus	No	Yes
Married	1767	252
Single	1050	360
Divorced	882	99
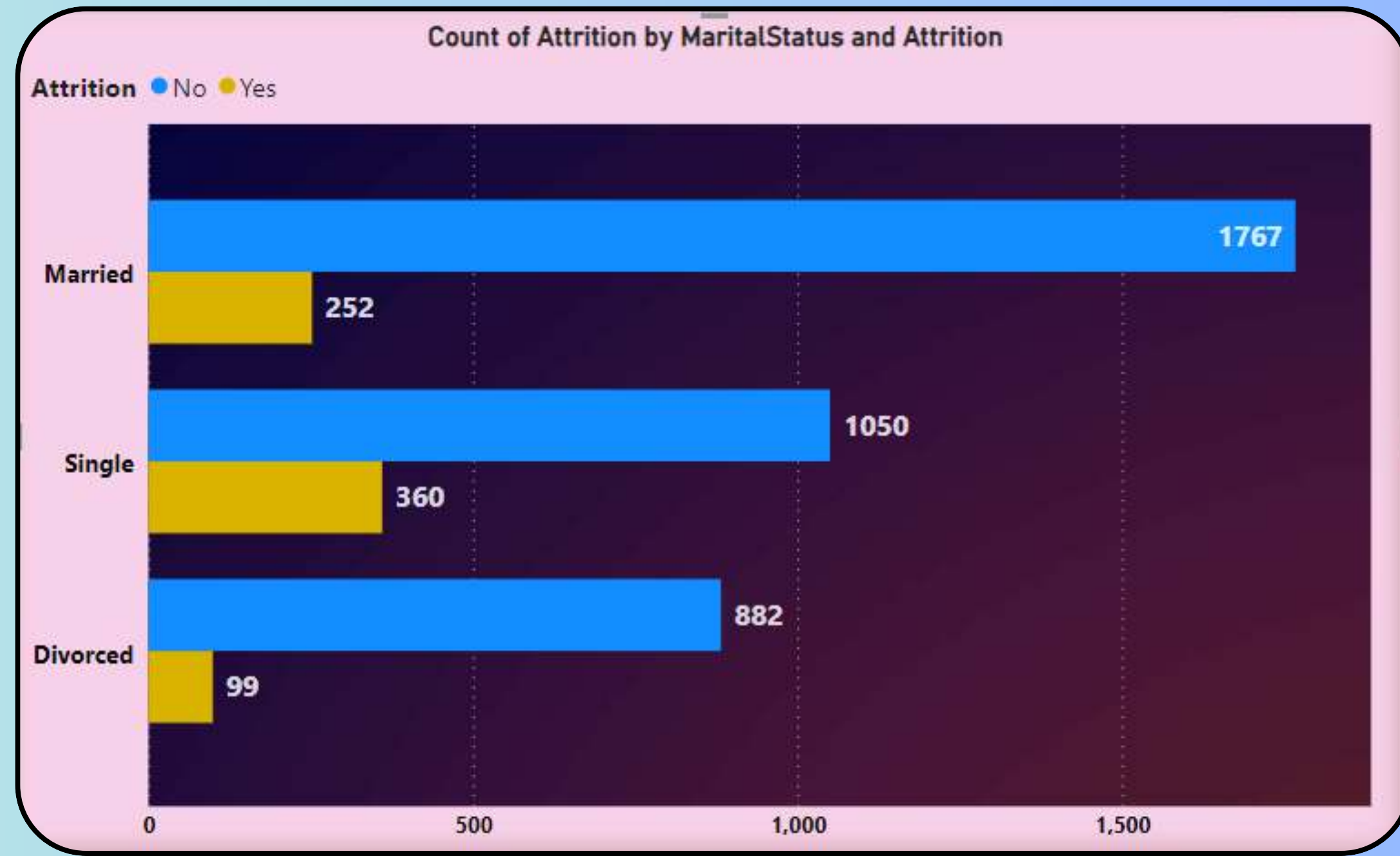
:Attrition Count % over Age Group:

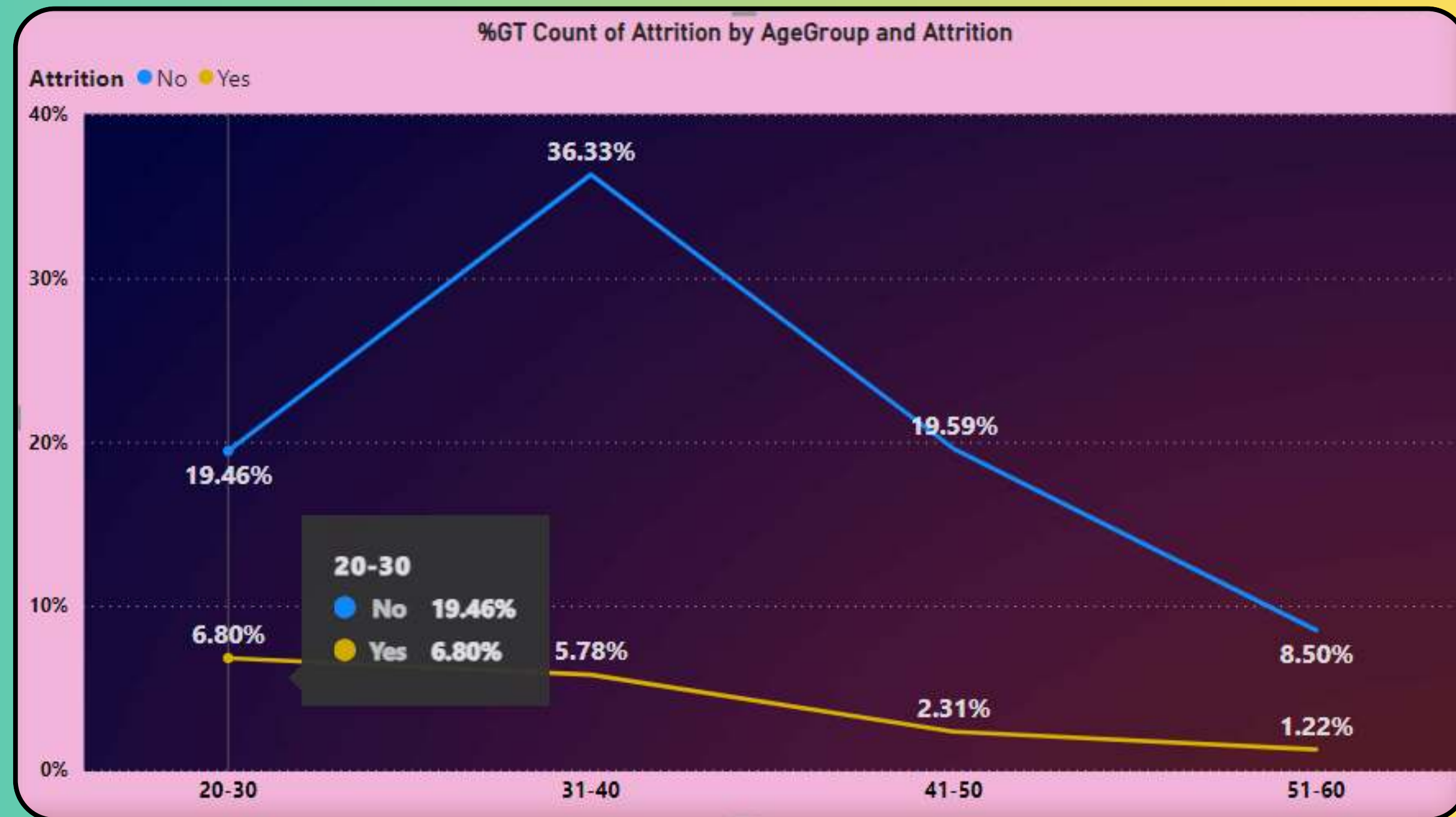**Younger employees (20-30 age group) exhibit higher attrition Count(6.80%) compared to older employees. Understanding age-related attrition patterns can inform targeted retention strategies, such as mentorship programs or career development initiatives.**

%GT Count of Attrition by AgeGroup and Attrition

Attrition ● No ● Yes

	20-30	31-40	41-50	51-60
No	19.46%	36.33%	19.59%	8.50%
Yes	6.80%	5.78%	2.31%	1.22%

20-30
● No 19.46%
● Yes 6.80%

:Attrition Count over Yearsatcompany:

- **Employees with fewer years of service (1-3 years) have higher attrition rates compared to those with longer tenure.**
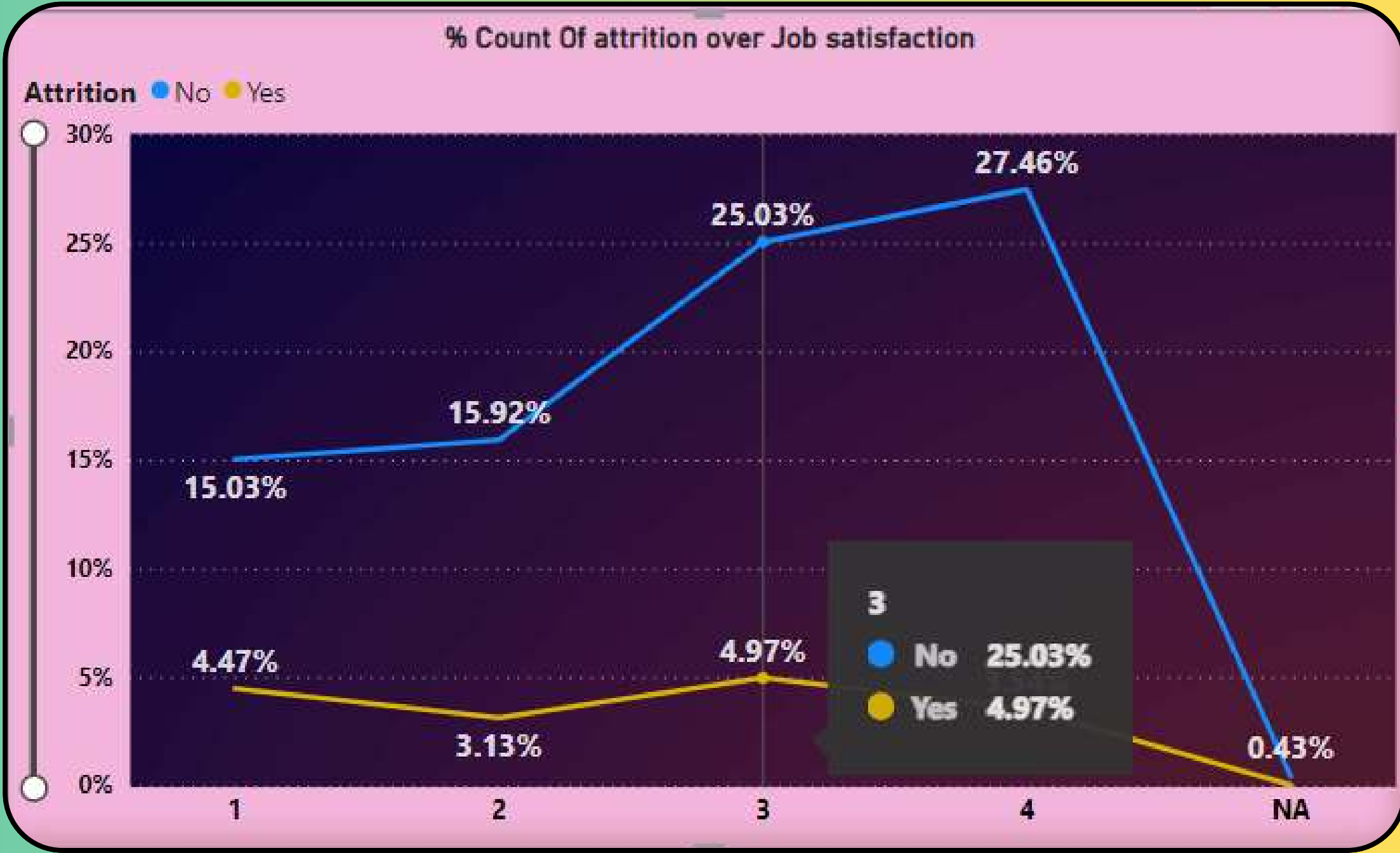- **There is a notable decrease in attrition rates as employees reach 5 or more years of service.**
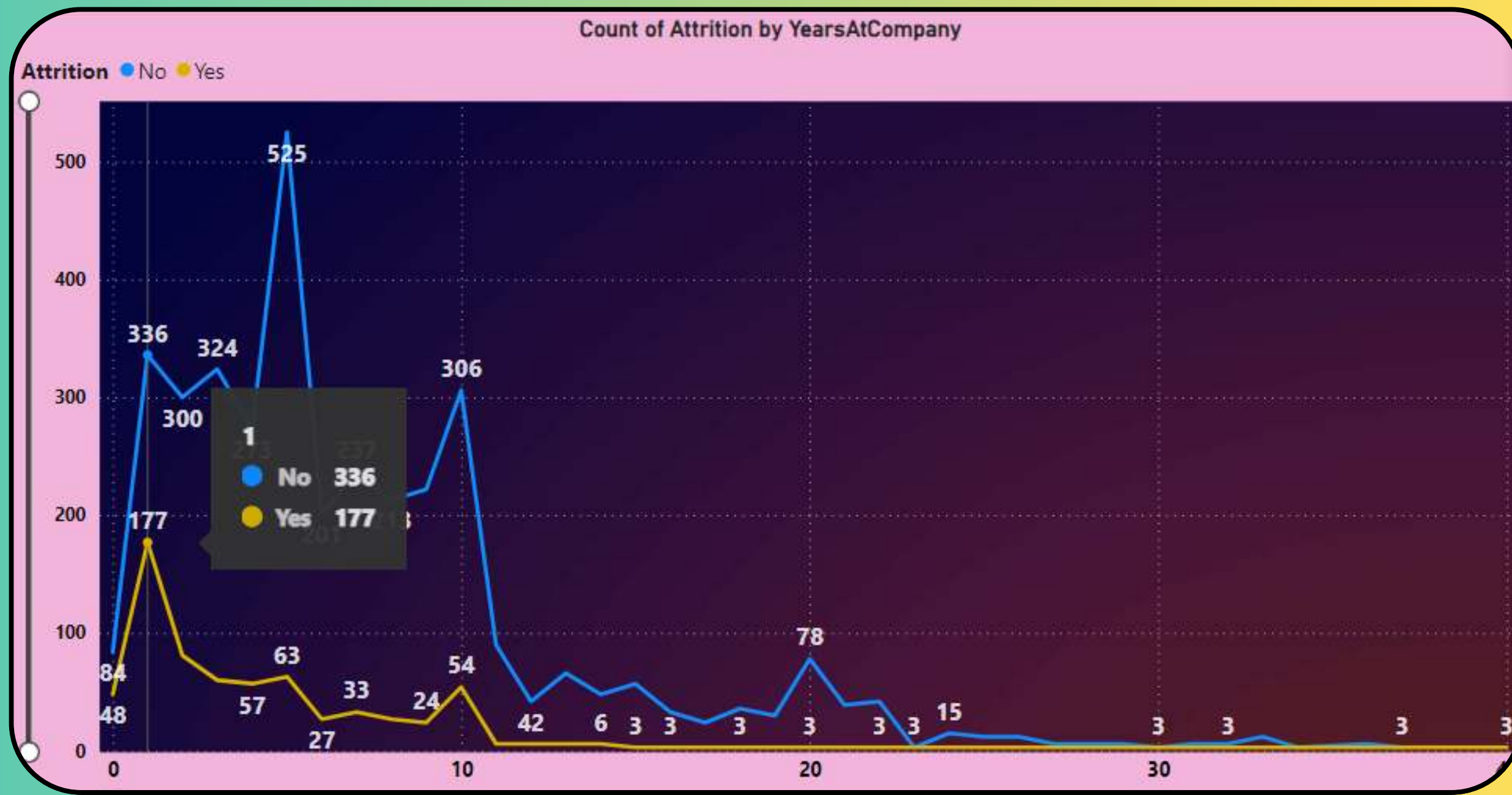
:Attrition Count % over Job Satisfaction:
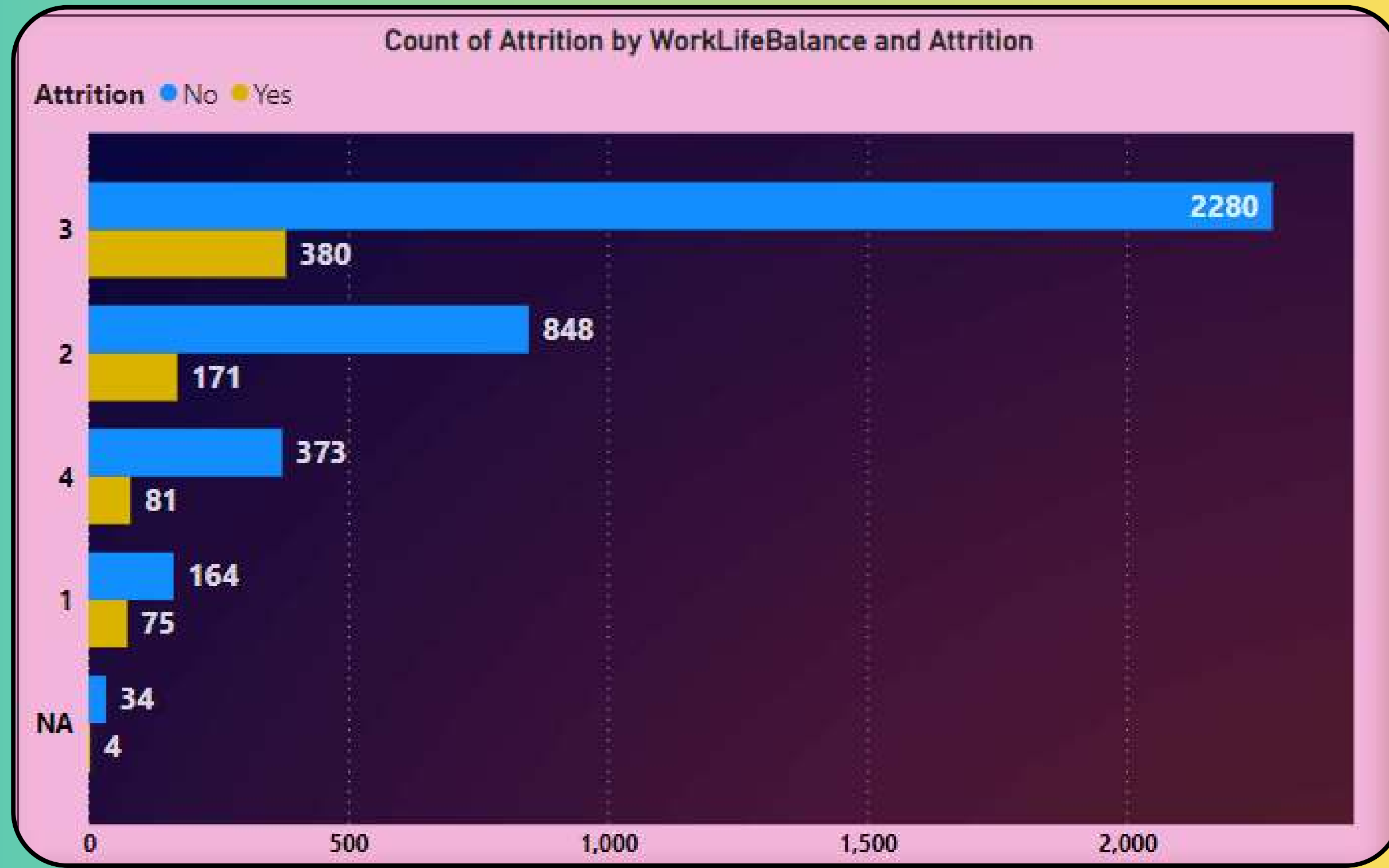
Employees with lower and mid job satisfaction Rating tend to have higher attrition rates, indicating the importance of addressing factors contributing to job dissatisfaction to improve retention.

% Count Of attrition over Job satisfaction

Attrition ● No ● Yes

- 27.46%
- 25.03%
- 15.92%
- 15.03%
- 4.47%
- 3.13%
- 4.97%
- 0.43%

3
● No 25.03%
● Yes 4.97%

1   2   3   4   NA

:Attrition Count Over Work Life Balance:

Employees reporting poor and mid work-life balance exhibit higher attrition rates, highlighting the need for policies and practices that support employee well-being and work-life integration.

Count of Attrition by WorkLifeBalance and Attrition

Attrition ● No ● Yes

WorkLifeBalance	No	Yes
3	2280	380
2	848	171
4	373	81
1	164	75
NA	34	4

:Attrition Count over Performance Rating:

Employees with lower performance ratings demonstrate higher attrition rates, emphasizing the importance of performance management and development programs in retaining top talent.

Count of Attrition by Performance rating

Attrition ● No ● Yes

Performance rating	No	Yes
4	555	123
3	3144	588
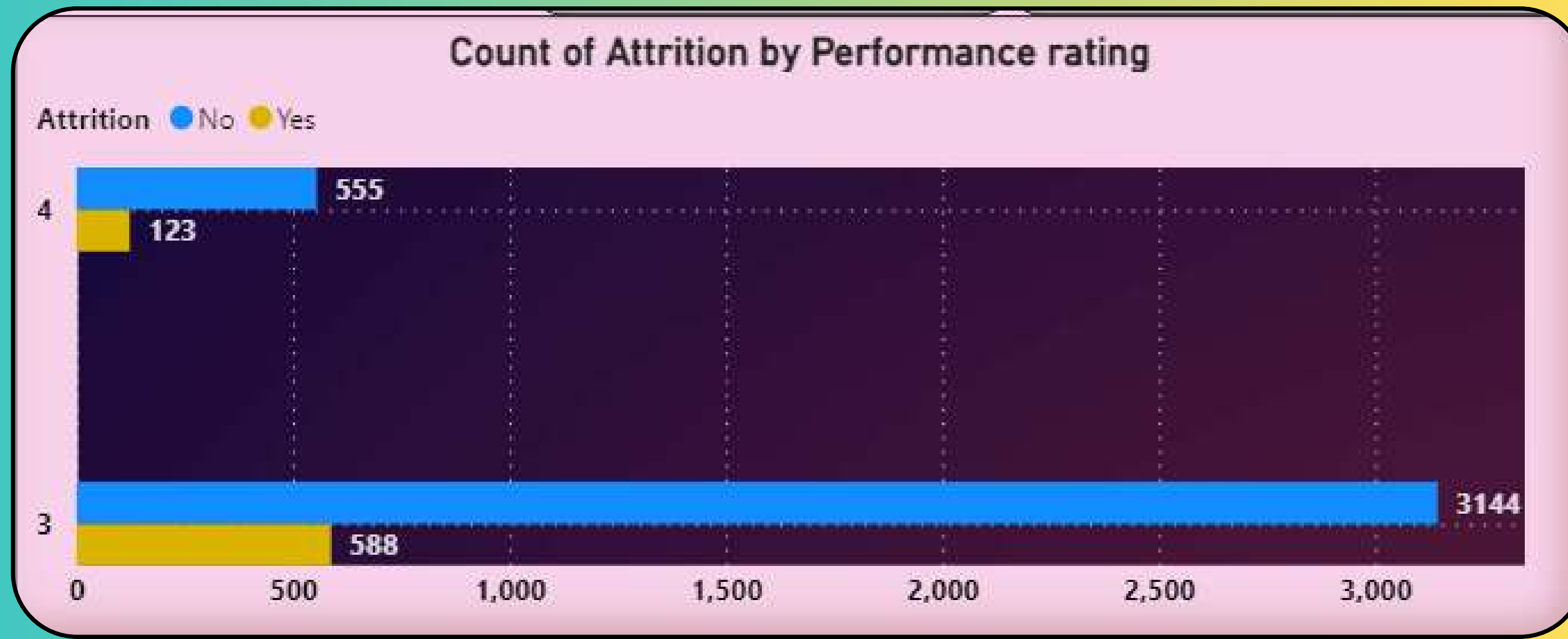
Employee Attrition Analysis- Dashboard

Total Employee
4410

MaritalStatus
Divorc... | Married | Single

Gender
Select.. | Female | Male

Employee Count by Attrition
711 (1...)
3699 (...)
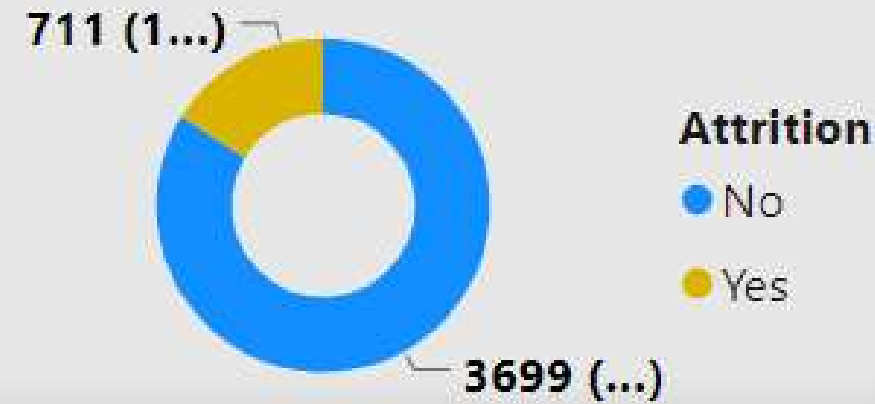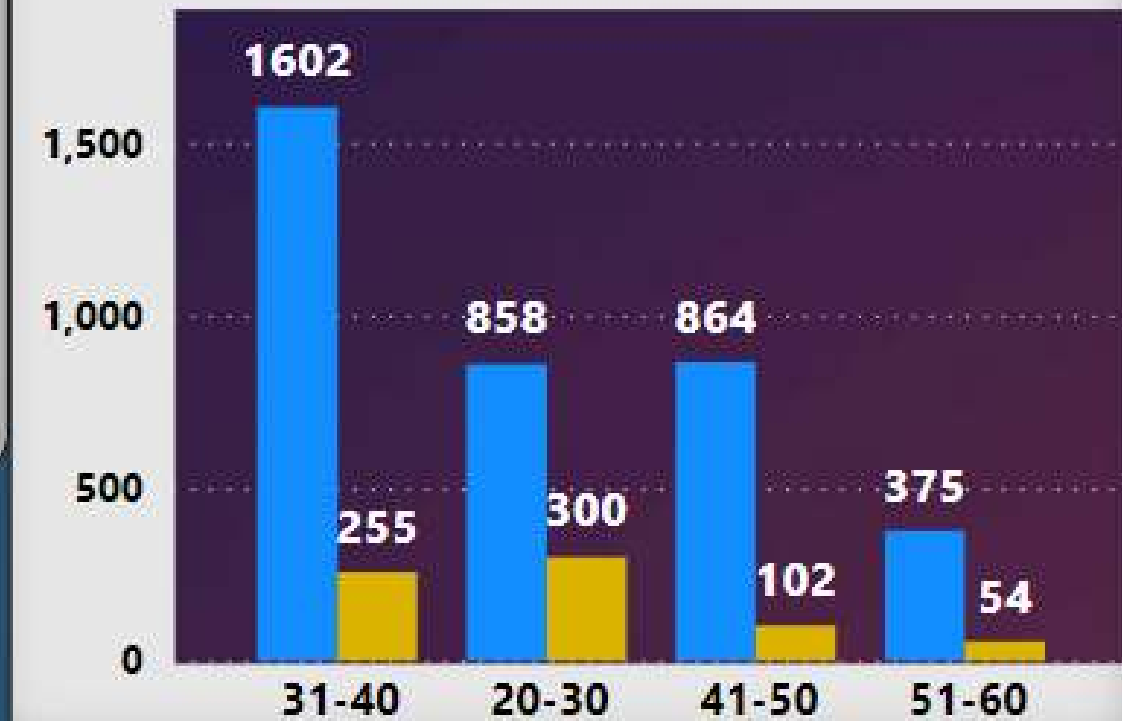
Attrition
- No
- Yes

Attrition Count Over Department
Attrition ● No ● Yes

Age	No	Yes
31-40	1602	255
20-30	858	300
41-50	864	102
51-60	375	54

Attrition Count Over Department
Attrition ● No ● Yes

Department	No	Yes
Research & Development	2430	453
Sales	1137	201
Human Resources	132	57
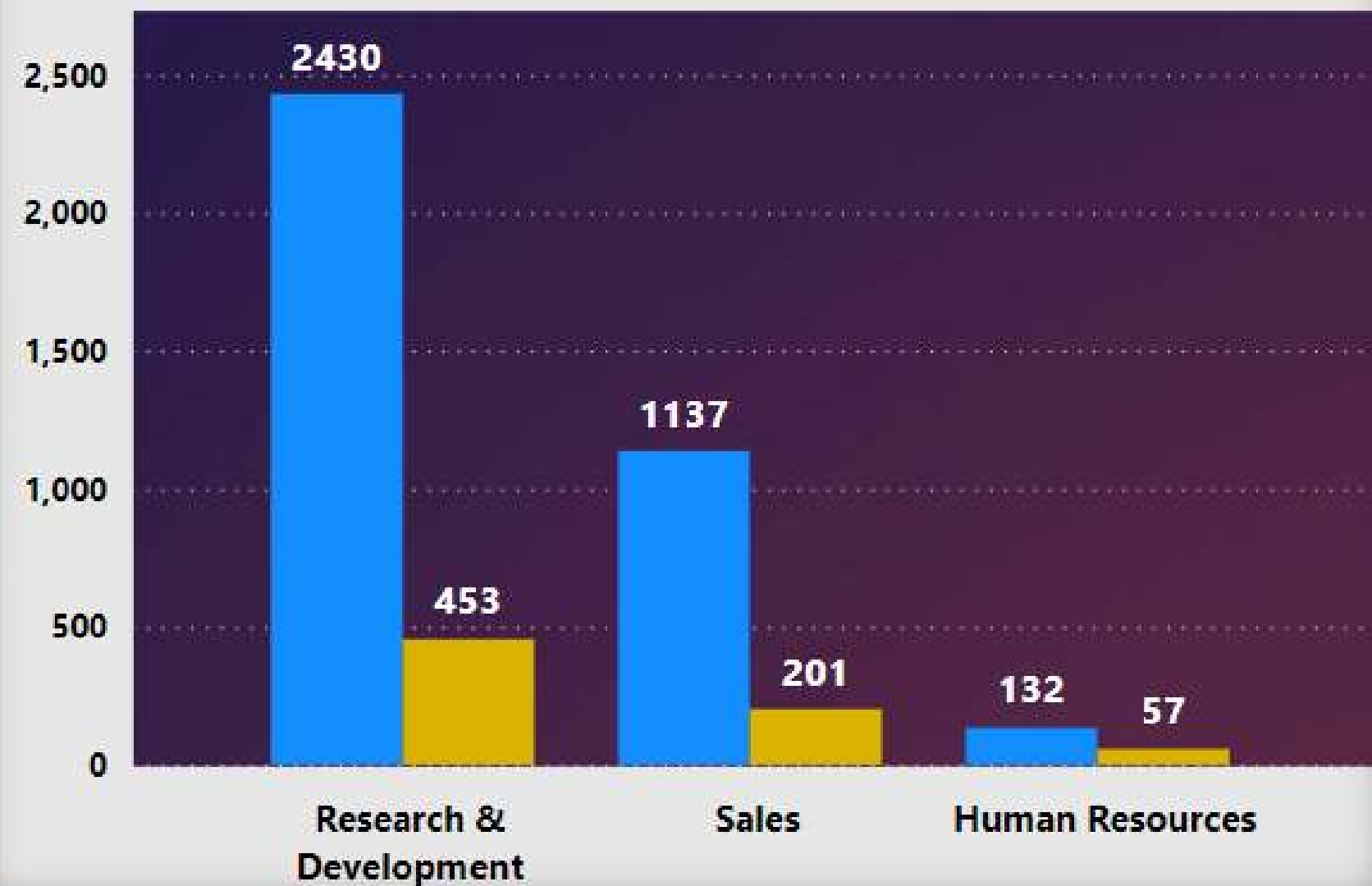
Attrition Rate %
16.12
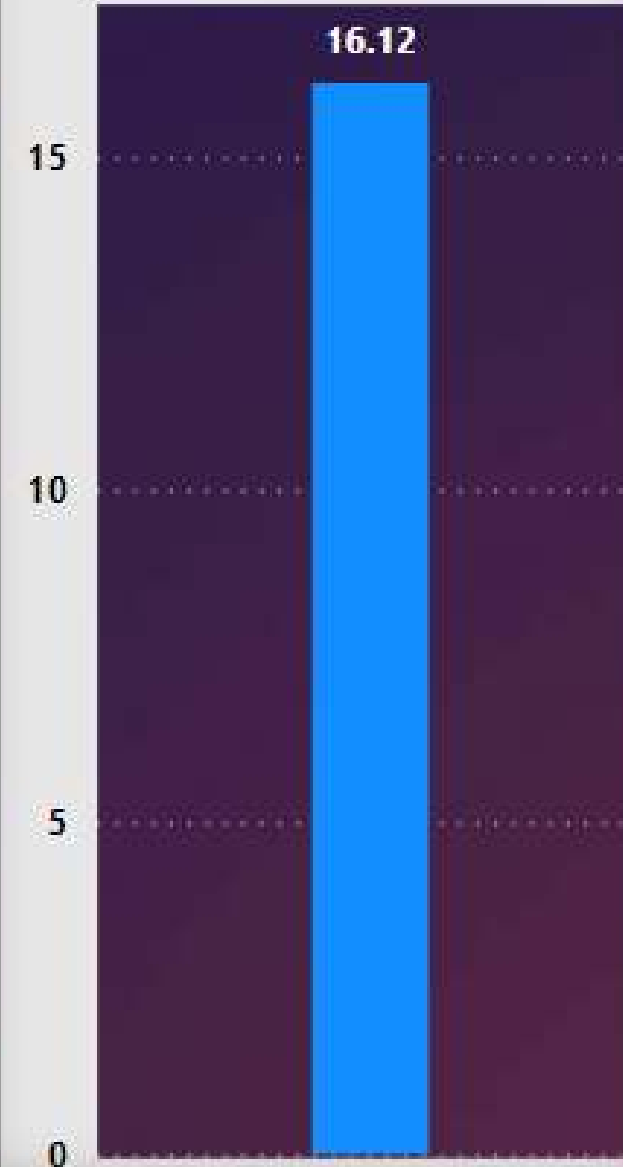
Attrition Count Over Job Role
Attrition ● No ● Yes

Job Role	No	Yes
Sales Exec...	813	165
Research Scie...	717	159
Laboratory T...	651	126
Manufacturi...	387	48
Healthcare R...	336	57
Manager	264	42
Sales Represe...	213	36
Research Dir...	183	57
Human Reso...	135	21
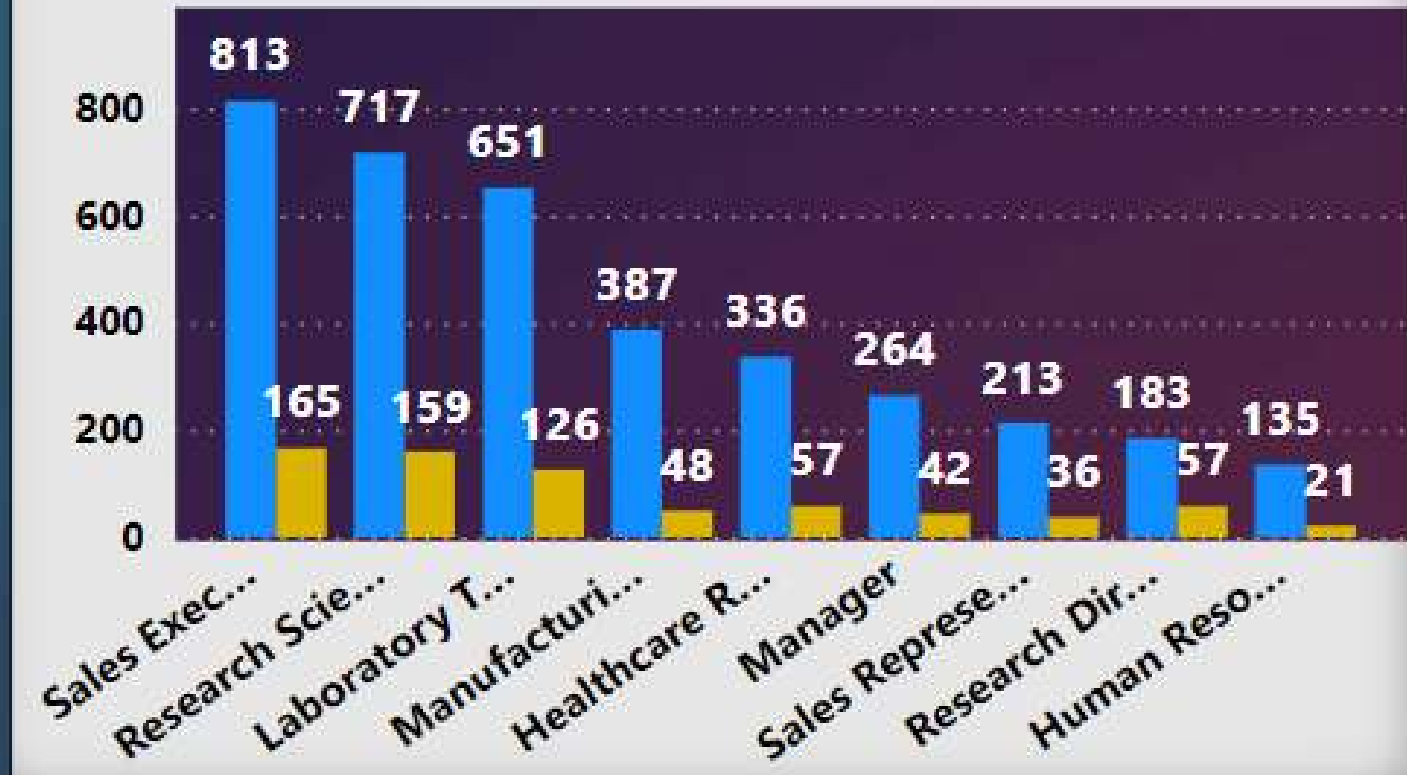
Employee Attrition Analysis

Gender

| S... | F... | M... |

MaritalStatus

| Divor... | Marri... | Single |

Count of Attrition by MaritalStatus

Attrition ● No ● Yes

MaritalStatus	No	Yes
Married	1767	252
Single	1050	360
Divorced	882	99
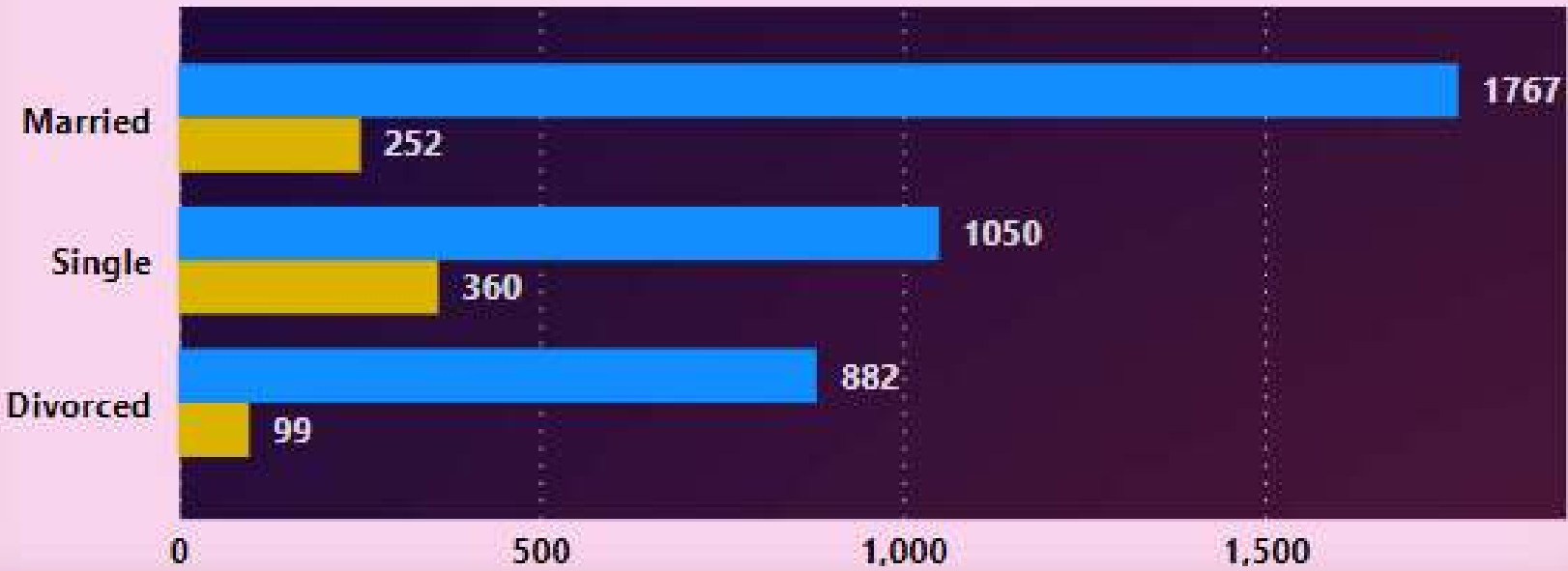
Attrition Count Over Gender

Attrition ● No ● Yes

Gender	No	Yes
Male	2205	441
Female	1494	270
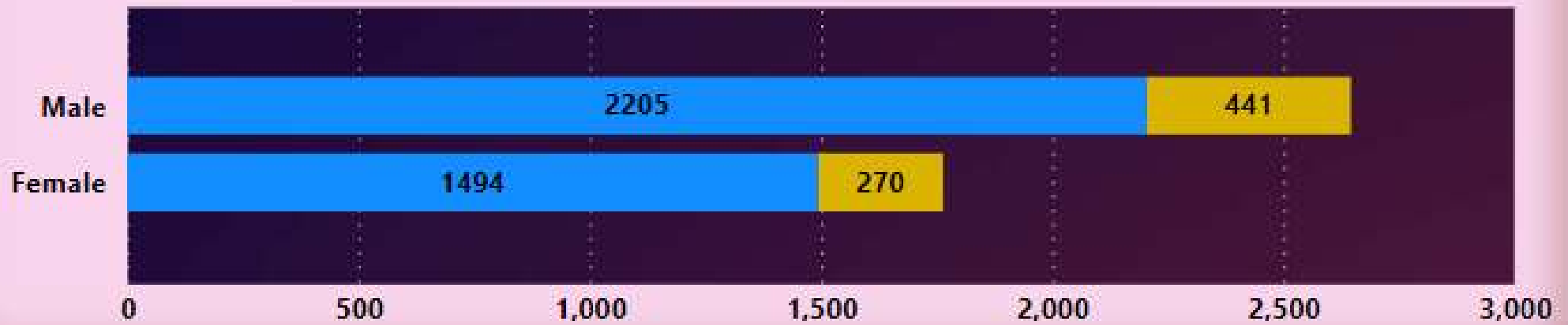
Attrition Count Over Business Travel

Attrition ● No ● Yes

Business Travel	No	Yes
Travel_Rarely	2661	468
Travel_Frequently	624	
Non-Travel	414	
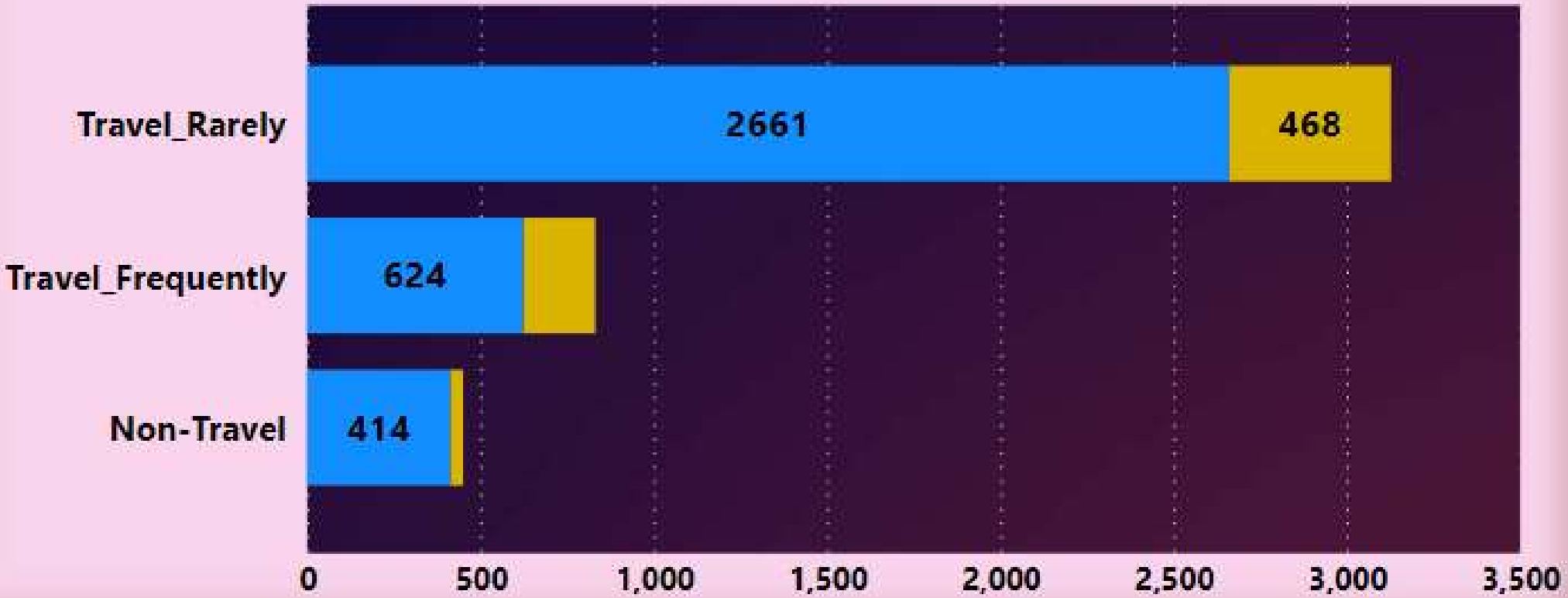
%GT Count of Attrition by AgeGroup

Attrition ● No ● Yes

AgeGroup	No	Yes
20-30	19.46%	6.80%
31-40	36.33%	5.78%
41-50	19.59%	2.31%
51-60	8.50%	1.22%
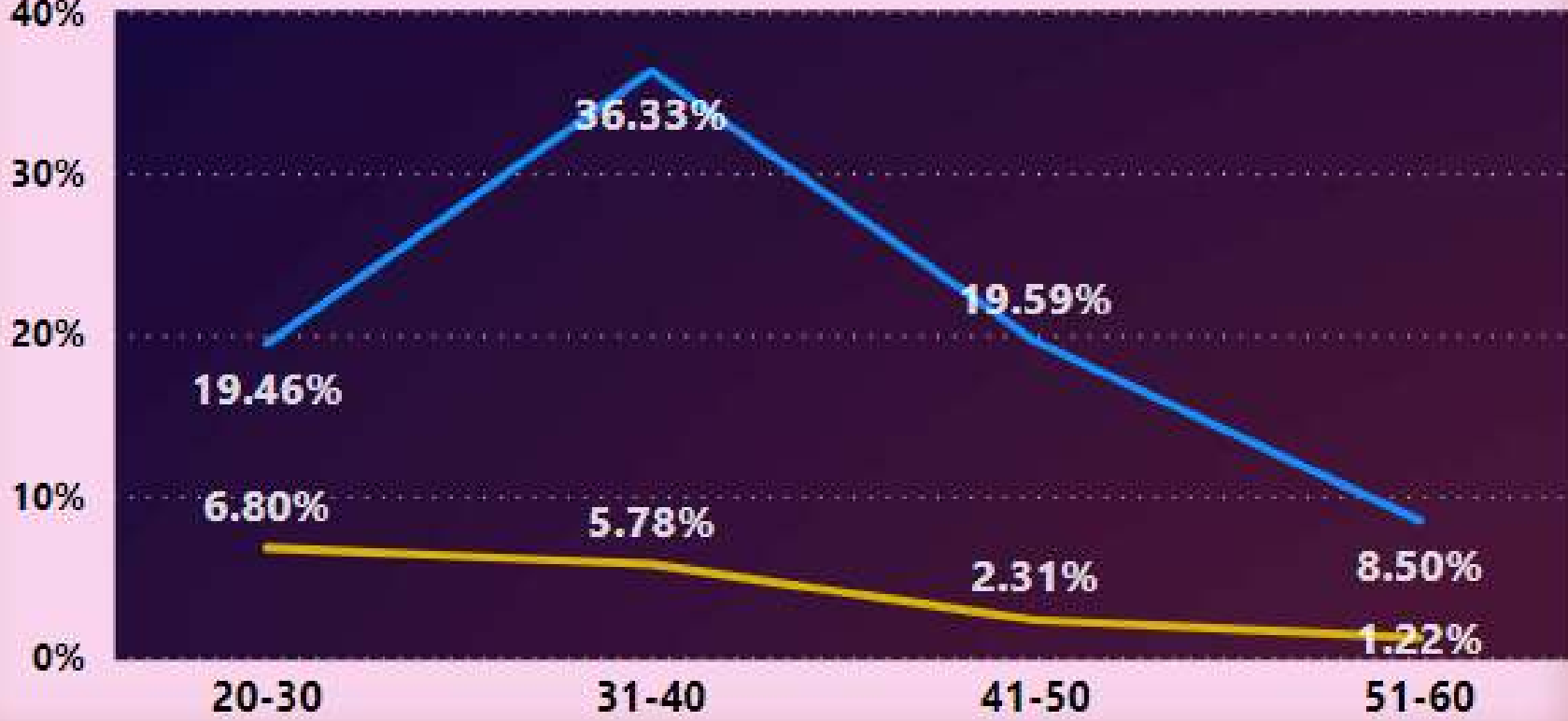
Employee Attrition Analysis

MaritalStatus
| Di... | M... | Si... |

Gender
| Sele... | Fem... | Male |

Count of Attrition by WorkLifeBalance

Attrition ● No ● Yes

WorkLifeBalance	No	Yes
3	2280	380
2	848	171
4	373	81
1	164	75
NA	34	4

(x-axis: 0, 500, 1,000, 1,500, 2,000)

Count of Attrition by Performance rating

Attrition ● No ● Yes

Performance rating	No	Yes
4	555	123
3	3144	588

(x-axis: 0, 500, 1,000, 1,500, 2,000, 2,500, 3,000)
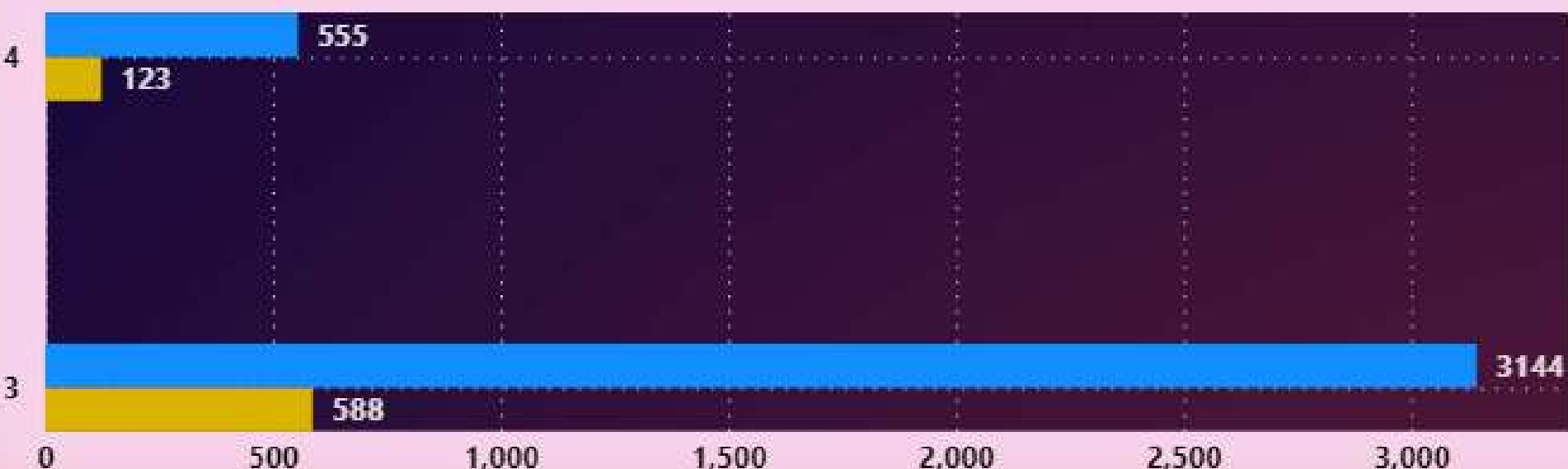
Count of Attrition by YearsAtCompany

Attrition ● No ● Yes

No line values: 48, 177, 324, 273, 525, 213, 306, 42, 3, 78
Yes line values: 84, 57, 63, 27, 24, 54

(y-axis: 0, 200, 400, 600; x-axis: 0, 5, 10, 15)

% Count Of attrition over Job satisfaction

Attrition ● No ● Yes

No line: 15.03%, 15.92%, 25.03%, 27.46%, 0.43%
Yes line: 4.47%, 3.13%, 4.97%, 3.54%, 0.43%

(y-axis: 0%, 10%, 20%, 30%; x-axis: 1, 2, 3, 4, NA)
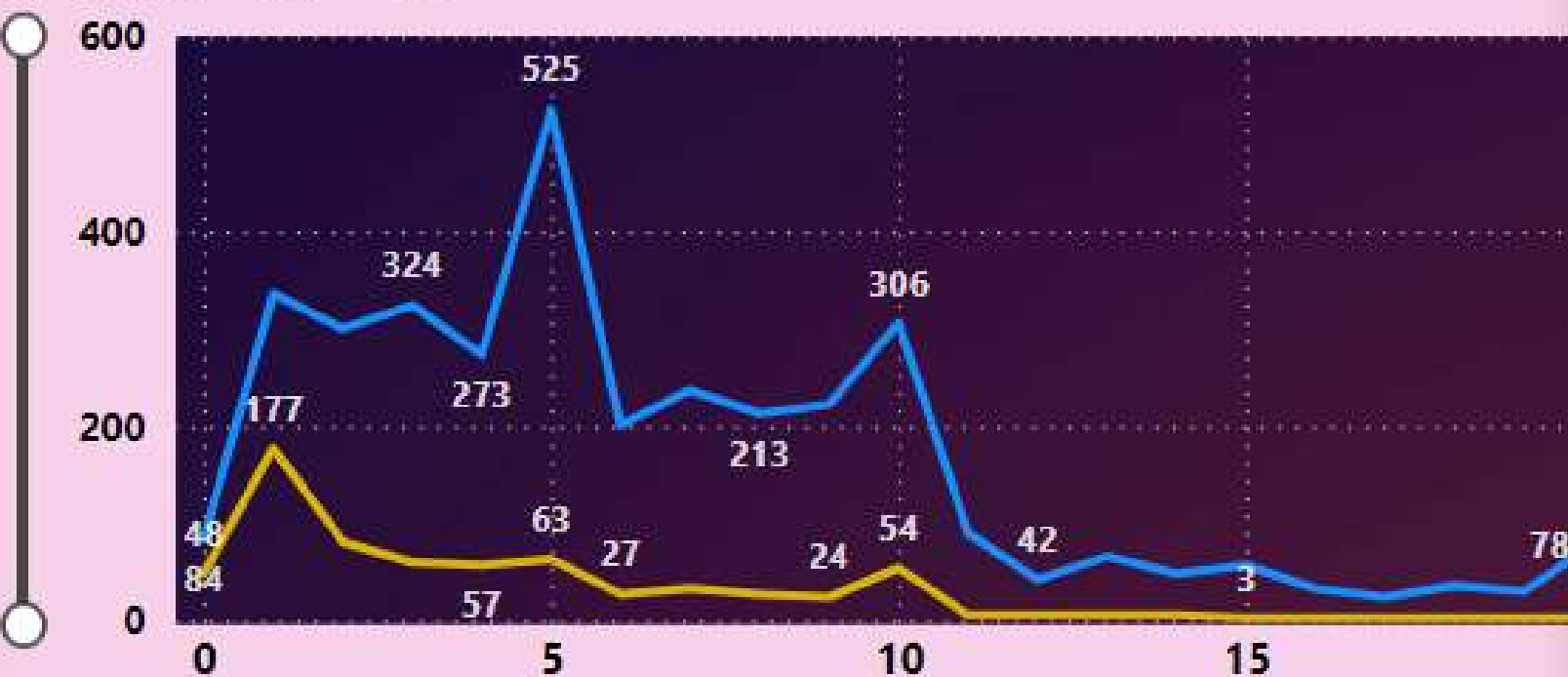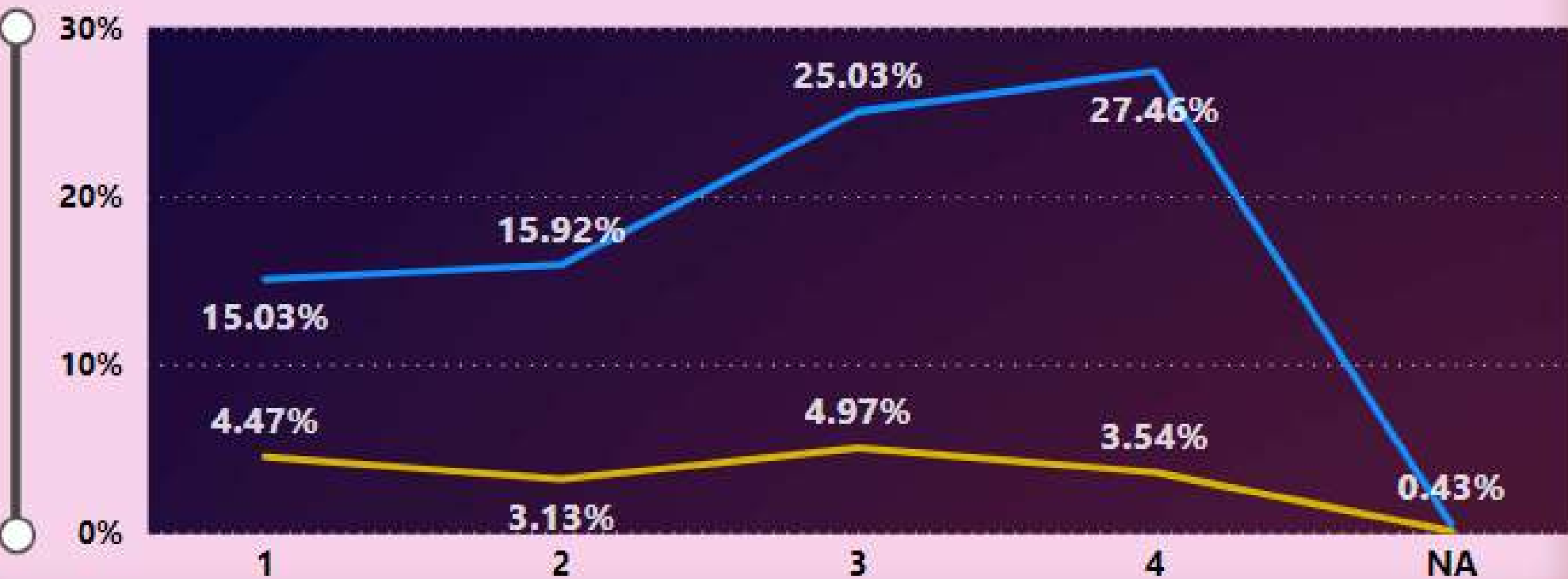
Presented by Ankit Gangwar

Thank you very much!