

Analyzing Employee Burnout Rate

(survey from HackerEarth)

HackerEarth hosted a competition two years ago that wanted contestants to predict employee burnout due to certain conditions. They created a survey that was taken anonymously and it asked

- The date of joining
- Person's gender (male or female)
- Company type (Service or Product)
- The availability to work at home
- Designation (from 0.0-5.0; higher the rank, the higher the employee's position in the company)
- Resource allocation - The amount of resource allocated to the employee to work, ie. number of working hours (From 1.0 - 10.0)
- The level of mental fatigue that a person is facing (From 0.0-10.0)
- The level of burnout (From 0.0-1.0)

Mental Health, especially the mental health of many workers around the world, is very important to acknowledge since there are many that are diagnosed with different types of mental illnesses, including depression and anxiety. Employees feeling burnt out from their job can result in having those mental illnesses, but it can also affect a company's overall production. Happy employees tend to be more productive at work, which will help their own company succeed in the long run!

Goal: Finding the answers to these questions

- Would an employee that belongs to a specific company type or specific industry are least/most likely going to get burnout?
- What amount of resource allocation would get an employee to burnout (on average)?

- Does working remote affect burnout?
- What gender are most likely going to get burnout?
- Does designation contribute to the burnout?
- Would the amount of time that a person has been part of company contribute to that person's burnout?
- Is mental fatigue a causation of burnout Or are there other factors that contribute to it as well?

I would like to thank Paras Varshney for posting the dataset on Kaggle and making it available for everyone's use (If you want to use this dataset, click [here](#))

Other Important details:

- Using mySQL
- Original sample size
 - **Original Amount of males: 10842**
 - **Original Amount of females: 11908**
- AFTER CLEAN UP (removing null values)
 - **Amount of males: 9747**
 - **Amount of females: 8843**

Limitations:

- There's no data that's collected on the amount of production that an employee has outputted
- No data that collects job satisfaction
- No data on whether the employee's company practice good ethics or fairness (ex: rank from 1-10 on how fair the company treats the workers)
- All of the employees joined their company in the year 2008. No other employee has joined years either before or after it.

- No data on where they're from (state/country)

1.0 Find the top and bottom five employees in terms of burn out, also finding the averages of the participants

```
1 CREATE VIEW `top_5` AS
2 SELECT * FROM employee_burnout.table
3 ORDER BY `Burn rate` DESC
4 LIMIT 5
```

- Created a View called `top_5`, which queries the top 5 employees in terms of Burn rate

```
1 CREATE VIEW `bottom_5` AS
2 SELECT * FROM employee_burnout.table
3 ORDER BY `Burn Rate` ASC
4 LIMIT 5
```

- Created a View called `bottom_5` that queries the bottom five employees in terms of Burn Rate.

| | Employee ID | Date of Joining | Gender | Company Type | WFH Setup Available | Designation | Resource Allocation | Mental Fatigue Score | Burn Rate |
|---|-------------------------|-----------------|--------|--------------|---------------------|-------------|---------------------|----------------------|-----------|
| ▶ | ffe31003500370031003700 | 2008-04-05 | Male | Product | Yes | 0 | 1.0 | 0 | 0 |
| | ffe33003000380035003200 | 2008-04-23 | Male | Service | No | 1 | 1.0 | 0 | 0 |
| | ffe31003500300031003400 | 2008-11-04 | Female | Service | No | 0 | 1.0 | 0 | 0 |
| | ffe31003900320039003300 | 2008-05-12 | Female | Product | Yes | 0 | 1.0 | 0.7 | 0 |
| | ffe3500390036003500 | 2008-02-13 | Male | Service | No | 0 | 1.0 | 0 | 0 |

(results: bottom_5)

| Employee ID | Date of Joining | Gender | Company Type | WFH Setup Available | Designation | Resource Allocation | Mental Fatigue Score | Burn Rate |
|--------------------------|-----------------|--------|--------------|---------------------|-------------|---------------------|----------------------|-----------|
| fffe31003200380037003200 | 2008-09-30 | Male | Service | Yes | 4 | 9.0 | 9.1 | 1 |
| fffe32003900380030003600 | 2008-10-25 | Male | Service | No | 4 | 10.0 | 10 | 1 |
| fffe32003400380036003000 | 2008-02-04 | Female | Product | No | 5 | 10.0 | 9.1 | 1 |
| fffe3300350032003000 | 2008-05-19 | Female | Service | No | 5 | 10.0 | 9.9 | 1 |
| fffe31003200390032003400 | 2008-09-25 | Female | Product | No | 5 | 10.0 | 9.2 | 1 |

(results: top_5)

- A low designation, resource allocation, and mental fatigue score = *low* burn rate
- a high designation, resource allocation, and mental fatigue score = *high* burn rate
- 2 “work from home” employees in the bottom five, while there were only 1 “work from home” in the top five.
- There wasn’t any major difference with the company type that the employee worked for.
- Most important Factors?
 - Designation rank
 - Resource allocation
 - Mental fatigue score

```

1  SELECT
2      `Gender`,
3      `Company Type`,
4      `WFH Setup Available`,
5      AVG(`Designation`) AS `avg_designation`,
6      AVG(`Resource Allocation`) AS `avg ra`,
7      AVG(`Mental fatigue Score`) AS `avg mf`,
8      AVG(`Burn Rate`) AS `avg br`
9  FROM
10     employee_burnout.table
11  GROUP BY `Gender`, `Company Type`, `WFH Setup Available`
12  ORDER BY `Gender`, `Company Type`, `WFH Setup Available`
13

```

- Created table `avg`, which takes the averages of what the participants of this survey provided, such as `Designation`, `Resource allocation`, `Mental fatigue score`, and `Burn Rate`. They were also grouped by `Gender`, `Company Type`, and `WFH Setup Available`.

| Gender | Company Type | WFH Setup Available | avg_designation | avg ra | avg mf | avg br |
|--------|--------------|---------------------|--------------------|--------------------|--------------------|---------------------|
| Female | Product | No | 2.3681978798586574 | 4.853003533568905 | 6.042685512367498 | 0.49090459363957656 |
| Female | Product | Yes | 1.8165618448637317 | 3.7127882599580713 | 5.0047693920335465 | 0.37104821802934995 |
| Female | Service | No | 2.3140556368960468 | 4.777818448023426 | 5.9931918008784795 | 0.48260614934114027 |
| Female | Service | Yes | 1.8800108342361863 | 3.8049837486457205 | 5.092009750812565 | 0.379553087757316 |
| Male | Product | No | 2.5716145833333335 | 5.390625 | 6.591406250000003 | 0.546679687499999 |
| Male | Product | Yes | 2.0077071290944124 | 4.142581888246628 | 5.4425176621708475 | 0.4176429030186255 |
| Male | Service | No | 2.5954118873826904 | 5.426485922836288 | 6.590406673618364 | 0.5502989224887005 |
| Male | Service | Yes | 2.050817960320223 | 4.180647406891751 | 5.474939088061242 | 0.42303515489035853 |

- it’s quick to judge that Male employees have a higher mental fatigue score and burn rate average compared to females in every category

| Gender | Company Type | WFH Setup Available | avg_designation | avg ra | avg mf | avg br |
|----------|--------------|---------------------|--------------------|-------------------|-------------------|---------------------|
| ▶ Female | Product | No | 2.3681978798586574 | 4.853003533568905 | 6.042685512367498 | 0.49090459363957656 |
| ■ Male | Product | No | 2.5716145833333335 | 5.390625 | 6.591406250000003 | 0.546679687499999 |

| Gender | Company Type | WFH Setup Available | avg_designation | avg ra | avg mf | avg br |
|----------|--------------|---------------------|--------------------|--------------------|--------------------|---------------------|
| ▶ Female | Product | Yes | 1.8165618448637317 | 3.7127882599580713 | 5.0047693920335465 | 0.37104821802934995 |
| ■ Male | Product | Yes | 2.0077071290944124 | 4.142581888246628 | 5.4425176621708475 | 0.4176429030186255 |

| Gender | Company Type | WFH Setup Available | avg_designation | avg ra | avg mf | avg br |
|----------|--------------|---------------------|--------------------|-------------------|--------------------|---------------------|
| ▶ Female | Service | No | 2.3140556368960468 | 4.777818448023426 | 5.9931918008784795 | 0.48260614934114027 |
| ■ Male | Service | No | 2.5954118873826904 | 5.426485922836288 | 6.590406673618364 | 0.5502989224887005 |

| Gender | Company Type | WFH Setup Available | avg_designation | avg ra | avg mf | avg br |
|----------|--------------|---------------------|--------------------|--------------------|-------------------|---------------------|
| ▶ Female | Service | Yes | 1.8800108342361863 | 3.8049837486457205 | 5.092009750812565 | 0.379553087757316 |
| ■ Male | Service | Yes | 2.050817960320223 | 4.180647406891751 | 5.474939088061242 | 0.42303515489035853 |

- the gender of an employee may not be the x-factor here, but more so whether an employee works from home, combined with their designation rank and the resource allocated to an employee.
 - The lower the numbers on designation, ra, and mf score... the lower the burn rate.
- The difference between company types isn't as drastic.
 - Difference between men that work for a product (no wfh) and men that work for a service (no wfh): less than 1% difference
 - Difference between men that work for a product (w/ wfh) and men that work for a service (w/ wfh): less than 1% difference
 - Difference between women that work for a product (no wfh) and women that work for a service (no wfh): less than 1% difference
 - Difference between women that work for a product (w/ wfh) and women that work for a service (w/ wfh): less than 1% difference

1.1 Find the effectiveness of the option to work at home

```
1 SELECT
2     `WFH Setup Available`,
3     AVG(`Mental Fatigue Score`) AS `avg mf`,
4     AVG(`Burn Rate`) AS `avg br`
5 FROM
6     employee_burnout.table
7 GROUP BY `WFH Setup Available`
8 LIMIT 2
```

- Created a query that gets the average burn rate from “work from home” employees and employees that don’t work from home

Results:

| | WFH Setup Available | avg mf | avg br |
|---|---------------------|-------------------|---------------------|
| ▶ | No | 6.309439252336445 | 0.5182266355140233 |
| | Yes | 5.2395114656032 | 0.39630309072781417 |

- There is a difference of 1% in the average mental fatigue score (rounded)
- a difference of 12% between the wfh and non-wfh employees.
- Employees that work at home tend to experience less mental fatigue, which would lead to a lower burnout rate.

```

1
2 SELECT `WFH Setup Available`, COUNT(`WFH Setup Available`) AS `count`
3 FROM employee_burnout.table
4 WHERE `Burn Rate` >= .65
5 GROUP BY `WFH Setup Available`
6 ORDER BY `count` DESC;

```

- Created a query that selects the rows with a burn rate of .65 or more. Only selected the column ,`WFH Setup Available`, and created another column that counts the amount of people who works at home or not and named it `count`.

| | WFH Setup Available | count |
|---|---------------------|-------|
| ▶ | No | 2155 |
| | Yes | 963 |

- Employees that don't work at home (=>.65 burn rate) > Employees that do work at home (=> .65 burn rate).

```

1 SELECT `WFH Setup Available`, COUNT(`WFH Setup Available`) as `count`
2 FROM employee_burnout.table
3 WHERE `Burn Rate` < .65
4 GROUP BY `WFH Setup Available`
5 ORDER BY `count` DESC;

```

- Created a query that selected rows with burn rate less than .65.

| | WFH Setup Available | count |
|---|---------------------|-------|
| ▶ | Yes | 9067 |
| | No | 6405 |

- There is a massive difference between the two
- There were 2662 more employees that had a work from home option with a low burn rate than employees that did not have that option with a low burn rate.

```

1 CREATE VIEW `wfh count` AS
2   WITH `wfh case` AS(
3     SELECT *,
4     CASE
5       WHEN `WFH Setup Available` = 'Yes' AND `Burn Rate` >= .65 THEN 'WFH with HIGH burn rate'
6       WHEN `WFH Setup Available` = 'Yes' AND `Burn Rate` < .65 THEN 'WFH with LOW burn rate'
7       ELSE 'no wfh setup available'
8     END AS `WFH br`
9   FROM employee_burnout.table
10  )
11
12  SELECT `WFH br`, COUNT(`WFH br`) AS `count`
13  FROM `wfh case`
14  GROUP BY `WFH br`
15  ORDER BY `WFH br` DESC, `count` DESC
16  LIMIT 2

```

- Created View `wfh count` and it records the employees that has the work from home option with high or low burn rates. It then totals the amount of those two. It disregards employees that don't work from home.

| | WFH br | count |
|---|-------------------------|-------|
| ▶ | WFH with LOW burn rate | 9067 |
| | WFH with HIGH burn rate | 963 |

- A massive difference between the two
- There are over 9000 employees that have the work from home option with a low burn rate, compared to the 963 employees that have a high burn rate

1.2 Other factors along with the availability to work at home

```
1 CREATE VIEW `work_from_home_affect` AS
2 SELECT
3     `WFH Setup Available`,
4     `Designation`,
5     `Resource allocation`,
6     AVG(`Mental Fatigue Score`) AS `avg mf`,
7     AVG(`Burn Rate`) AS `avg br`
8 FROM
9     employee_burnout.table
10 GROUP BY `WFH Setup Available`, `Designation`, `Resource allocation`
11 ORDER BY AVG(`Burn Rate`) DESC
```

- Created View, `work_from_home_affect`, and the values are group up based on whether the employees have a remote setup available to them. The designation and resource allocation are also grouped up and it's to see whether all of these are also main factors of burn out. Lastly, the averages of mental fatigue score and burn rate were grouped up and it was ordered by burn rate in descending order

Heres the top ten results:

| | WFH Setup Available | Designation | Resource allocati... | avg mf | avg br |
|---|---------------------|-------------|----------------------|-------------------|--------------------|
| ► | No | 4 | 10.0 | 9.69047619047619 | 0.958095238095238 |
| | No | 3 | 9.0 | 9.414285714285715 | 0.9457142857142858 |
| | Yes | 4 | 10.0 | 9.8 | 0.935 |
| | Yes | 5 | 10.0 | 9.125000000000002 | 0.8983333333333334 |
| | No | 5 | 10.0 | 9.088000000000001 | 0.8842666666666668 |
| | Yes | 5 | 9.0 | 8.872916666666667 | 0.8527083333333335 |
| | No | 5 | 9.0 | 8.906603773584905 | 0.8483962264150944 |
| | No | 4 | 9.0 | 8.694193548387098 | 0.8185806451612908 |
| | No | 5 | 8.0 | 8.671052631578947 | 0.8139473684210523 |
| | Yes | 3 | 8.0 | 8.515873015873018 | 0.8028571428571428 |

- There are 6 employees that don't work at home compared to only 4 that have the remote option in the top ten.
- Almost everyone has a very high designation rank
- The employees that have a designation rank of 3 both have a very high resource allocation rank
 - One had an RA rank of 9 while the other had an RA rank of 8

- don't work at home, whose position in the company is high, but also have a high resource allocation = higher average mental fatigue score and a higher burn rate average.
- designation isn't as high, but very high resource allocation = higher average mental fatigue score and higher burn rate

Looked further into the data and saw the top 20 employees with the highest burn rate...

| | WFH Setup Available | Designation | Resource allocati... | avg mf | avg br |
|---|---------------------|-------------|----------------------|-------------------|--------------------|
| ► | No | 4 | 10.0 | 9.69047619047619 | 0.958095238095238 |
| | No | 3 | 9.0 | 9.414285714285715 | 0.9457142857142858 |
| | Yes | 4 | 10.0 | 9.8 | 0.935 |
| | Yes | 5 | 10.0 | 9.125000000000002 | 0.8983333333333334 |
| | No | 5 | 10.0 | 9.088000000000001 | 0.8842666666666668 |
| | Yes | 5 | 9.0 | 8.872916666666667 | 0.8527083333333335 |
| | No | 5 | 9.0 | 8.906603773584905 | 0.8483962264150944 |
| | No | 4 | 9.0 | 8.694193548387098 | 0.8185806451612908 |
| | No | 5 | 8.0 | 8.671052631578947 | 0.8139473684210523 |
| | Yes | 3 | 8.0 | 8.515873015873018 | 0.8028571428571428 |
| | Yes | 4 | 9.0 | 8.648750000000001 | 0.8026249999999999 |
| | Yes | 5 | 8.0 | 8.635714285714286 | 0.7892857142857144 |
| | No | 3 | 8.0 | 8.381818181818181 | 0.7765734265734262 |
| | No | 2 | 7.0 | 8.299999999999999 | 0.7323333333333332 |
| | Yes | 2 | 7.0 | 8.46875 | 0.7212500000000001 |
| | No | 4 | 8.0 | 8.011397849462364 | 0.720086021505376 |
| | Yes | 4 | 8.0 | 7.924456521739126 | 0.7022282608695652 |
| | Yes | 3 | 7.0 | 7.568707482993198 | 0.6594557823129251 |
| | No | 3 | 7.0 | 7.512866449511399 | 0.6557980456026056 |
| | Yes | 4 | 7.0 | 7.440167364016736 | 0.6507531380753143 |

- 10 work from home and 10 don't
- Designation rank starting to go down
 - Lowest designation rank: 2
- Resource allocation is still pretty high
 - Lowest RA rank: 7.0
- Those who have a low rank, but have a high amount of RA = high mental fatigue score and burn rate

| | | | | |
|-----|---|-----|-------------------|--------------------|
| No | 2 | 7.0 | 8.299999999999999 | 0.7323333333333332 |
| Yes | 2 | 7.0 | 8.46875 | 0.7212500000000001 |

- One of the employee does have the option to work at home, while having a pretty low designation rank, but have an above average resource allocation score (7). They still managed to get a high mental fatigue score and burn rate average.
- Biggest factor of a high burn rate: High amount of resource allocated to an employee can cause extreme burn rate

1.3 Find more effects of resource allocated to the employee

```

1 CREATE VIEW `RA_effect` AS
2 SELECT `Designation`, CAST(`Resource Allocation` AS FLOAT) `RA`, `Mental Fatigue Score`, `Burn Rate`,
3 CASE
4   WHEN `Designation` <= 3 AND `Resource Allocation` >= 7 THEN "HIGH FOR D RANK"
5   WHEN `Designation` >= 4 AND `Resource Allocation` >= 8 THEN "HIGH FOR D RANK"
6   ELSE "its fine or look it over"
7 END AS `verdict`
8 FROM employee_burnout.table

```

- Created View `RA_effect`, which basically takes the designation, the resource allocation, mental fatigue score, and the burn rate. The verdict whether the amount of resource allocation is “high” for a designation rank is based on the top 20 list from the previous analysis (Designation = 2, resource allocation = 7 : resource allocation is high for its rank)

```

1 SELECT * FROM employee_burnout.ra_effect
2 WHERE `RA` >= 7
3 AND `DESIGNATION` <= 2
4 ORDER BY `Burn Rate` DESC

```

- Selects Resource allocation rank of 7 and more w/ employees with a Designation rank of 2 and less. It is ordered by Burn rate in descending order.

(Using `RA_effect`, for an employee that has a designation rank of 2, is having a resource allocation rank greater than 7 automatically mean a high burn rate? Can there be a high burn rate with having less resources allocated to an employee??)

Result:

| Designation | RA | Mental Fatigue Sco... | Burn Rate | verdict |
|-------------|----|-----------------------|-----------|-----------------|
| 2 | 7 | 8.8 | 0.8 | HIGH FOR D RANK |
| 2 | 7 | 9.6 | 0.8 | HIGH FOR D RANK |
| 2 | 7 | 9.2 | 0.78 | HIGH FOR D RANK |
| 2 | 7 | 9 | 0.77 | HIGH FOR D RANK |
| 2 | 7 | 8.4 | 0.77 | HIGH FOR D RANK |
| 2 | 7 | 8.4 | 0.77 | HIGH FOR D RANK |
| 2 | 7 | 9.2 | 0.76 | HIGH FOR D RANK |
| 2 | 7 | 8.5 | 0.76 | HIGH FOR D RANK |
| 2 | 7 | 7.7 | 0.76 | HIGH FOR D RANK |
| 2 | 7 | 8.8 | 0.75 | HIGH FOR D RANK |
| 2 | 7 | 9.1 | 0.75 | HIGH FOR D RANK |
| 2 | 7 | 8.2 | 0.75 | HIGH FOR D RANK |
| 2 | 7 | 7.5 | 0.74 | HIGH FOR D RANK |
| 2 | 7 | 9 | 0.74 | HIGH FOR D RANK |
| 2 | 7 | 7.6 | 0.74 | HIGH FOR D RANK |
| 2 | 7 | 8.1 | 0.74 | HIGH FOR D RANK |
| 2 | 7 | 9 | 0.74 | HIGH FOR D RANK |
| 2 | 7 | 7.9 | 0.74 | HIGH FOR D RANK |
| 2 | 7 | 9.2 | 0.74 | HIGH FOR D RANK |
| 2 | 7 | 9 | 0.73 | HIGH FOR D RANK |
| 2 | 7 | 7.8 | 0.72 | HIGH FOR D RANK |
| 2 | 7 | 8.9 | 0.72 | HIGH FOR D RANK |
| 2 | 7 | 7.9 | 0.72 | HIGH FOR D RANK |
| 2 | 7 | 7.1 | 0.72 | HIGH FOR D RANK |

- All had a high mental fatigue score
- All had high burn rates

```

1  SELECT * FROM employee_burnout.ra_effect
2  WHERE `RA` < 7
3  AND `DESIGNATION` <=2
4  AND `Burn Rate` >= .65
5  ORDER BY `Burn Rate` DESC

```

- This gathers Designation Rank 2 and less, with an RA rank less than 7

| | Designation | RA | Mental Fatigue Sco... | Burn Rate | verdict |
|---|-------------|----|-----------------------|-----------|--------------------------|
| ▶ | 2 | 6 | 7.9 | 0.81 | its fine or look it over |
| | 2 | 5 | 9.7 | 0.81 | its fine or look it over |
| | 2 | 5 | 8.8 | 0.8 | its fine or look it over |
| | 2 | 5 | 8.7 | 0.79 | its fine or look it over |
| | 2 | 6 | 9.5 | 0.79 | its fine or look it over |
| | 2 | 6 | 9 | 0.79 | its fine or look it over |
| | 2 | 6 | 7.7 | 0.78 | its fine or look it over |
| | 2 | 6 | 8 | 0.78 | its fine or look it over |
| | 2 | 6 | 8.3 | 0.78 | its fine or look it over |
| | 2 | 5 | 8.3 | 0.78 | its fine or look it over |
| | 2 | 6 | 8.6 | 0.78 | its fine or look it over |
| | 2 | 6 | 9.1 | 0.77 | its fine or look it over |
| | 2 | 6 | 8.7 | 0.77 | its fine or look it over |
| | 2 | 6 | 9.2 | 0.77 | its fine or look it over |
| | 2 | 6 | 8.9 | 0.77 | its fine or look it over |
| | 2 | 6 | 8 | 0.77 | its fine or look it over |
| | 2 | 6 | 7.5 | 0.76 | its fine or look it over |
| | 2 | 6 | 7.7 | 0.76 | its fine or look it over |
| | 2 | 6 | 7.7 | 0.76 | its fine or look it over |
| | 2 | 5 | 9 | 0.76 | its fine or look it over |
| | 2 | 6 | 8.4 | 0.76 | its fine or look it over |
| | 2 | 6 | 9 | 0.76 | its fine or look it over |
| | 2 | 6 | 9.3 | 0.76 | its fine or look it over |
| | 2 | 6 | 8.9 | 0.76 | its fine or look it over |
| | 2 | 5 | 7.9 | 0.76 | its fine or look it over |
| | 2 | 5 | 7.4 | 0.76 | its fine or look it over |
| | 2 | 6 | 8.5 | 0.76 | its fine or look it over |
| | 2 | 6 | 8 | 0.76 | its fine or look it over |

- There were results that resulted in a higher mental fatigue score and a higher burn rate!
- The burn rate still went down as the amount of resources allocated to the employee decreased.

```

1  SELECT * FROM employee_burnout.ra_effect
2  WHERE `Designation` >= 4
3  AND `RA` >= 9
4  ORDER BY `Burn Rate` DESC

```

- Collects Employees with a designation rank of more than 4 and resource allocation rank more than or equal to 9.

Results:

| | Designation | RA | Mental Fatigue Sco... | Burn Rate | verdict |
|---|-------------|----|-----------------------|-----------|-----------------|
| ▶ | 4 | 9 | 9.3 | 1 | HIGH FOR D RANK |
| | 5 | 10 | 9.4 | 1 | HIGH FOR D RANK |
| | 5 | 10 | 9.2 | 1 | HIGH FOR D RANK |
| | 5 | 9 | 10 | 1 | HIGH FOR D RANK |
| | 5 | 10 | 9.6 | 1 | HIGH FOR D RANK |
| | 5 | 10 | 10 | 1 | HIGH FOR D RANK |
| | 5 | 10 | 9.6 | 1 | HIGH FOR D RANK |
| | 4 | 9 | 9.8 | 1 | HIGH FOR D RANK |
| | 4 | 9 | 9.7 | 1 | HIGH FOR D RANK |
| | 4 | 9 | 10 | 1 | HIGH FOR D RANK |
| | 4 | 9 | 10 | 1 | HIGH FOR D RANK |
| | 4 | 10 | 10 | 1 | HIGH FOR D RANK |
| | 5 | 9 | 10 | 1 | HIGH FOR D RANK |
| | 5 | 10 | 10 | 1 | HIGH FOR D RANK |
| | 4 | 9 | 10 | 1 | HIGH FOR D RANK |
| | 5 | 10 | 10 | 1 | HIGH FOR D RANK |
| | 5 | 10 | 10 | 1 | HIGH FOR D RANK |
| | 4 | 9 | 9.2 | 1 | HIGH FOR D RANK |
| | 4 | 9 | 9.5 | 1 | HIGH FOR D RANK |
| | 4 | 9 | 10 | 1 | HIGH FOR D RANK |
| | 5 | 10 | 9.5 | 1 | HIGH FOR D RANK |

- All employees that have a high position with a high amount of resource allocation have a very high mental fatigue score and burn rate.

```

1  SELECT * FROM employee_burnout.ra_effect
2  WHERE `Designation` >= 4
3  AND `RA` <= 8
4  ORDER BY `Burn Rate` DESC
5  LIMIT 20

```

- Takes employees with a designation rank of 4 and greater with a resource allocation rank of 8 and less; Burn Rate is in descending order with a limit of 20 rows.

Results:

| | | | | | |
|---|---|---|-----|------|-----------------|
| ▶ | 4 | 8 | 10 | 1 | HIGH FOR D RANK |
| | 4 | 8 | 9.8 | 1 | HIGH FOR D RANK |
| | 4 | 8 | 9.9 | 1 | HIGH FOR D RANK |
| | 4 | 8 | 9.4 | 1 | HIGH FOR D RANK |
| | 4 | 8 | 10 | 1 | HIGH FOR D RANK |
| | 4 | 8 | 9.5 | 1 | HIGH FOR D RANK |
| | 4 | 8 | 10 | 0.99 | HIGH FOR D RANK |
| | 4 | 8 | 10 | 0.98 | HIGH FOR D RANK |
| | 4 | 8 | 9.5 | 0.98 | HIGH FOR D RANK |
| | 4 | 8 | 10 | 0.97 | HIGH FOR D RANK |
| | 4 | 8 | 9.5 | 0.95 | HIGH FOR D RANK |
| | 4 | 8 | 9.5 | 0.95 | HIGH FOR D RANK |
| | 4 | 8 | 10 | 0.95 | HIGH FOR D RANK |
| | 4 | 8 | 9.3 | 0.95 | HIGH FOR D RANK |
| | 4 | 8 | 9 | 0.93 | HIGH FOR D RANK |
| | 4 | 8 | 9.7 | 0.93 | HIGH FOR D RANK |
| | 4 | 8 | 10 | 0.92 | HIGH FOR D RANK |
| | 4 | 8 | 9.9 | 0.92 | HIGH FOR D RANK |
| | 4 | 8 | 10 | 0.92 | HIGH FOR D RANK |
| | 4 | 8 | 8.9 | 0.92 | HIGH FOR D RANK |

- They still had high burn rates
- High designation ranks still achieve really high burn rates, but still went down by as much as 8%

Resource allocation plays the biggest role in burn out, however an employees designation plays a close second.

- High designation + high resource allocation = high mental fatigue and high burn rate
- High designation + above average or high resource allocation = high mental fatigue and burn rate
- Low designation + above average or high resource allocation = high mental fatigue and burn rate

1.4 Find if there are higher burn rates from those who joined their company in certain months

```
1 CREATE VIEW `Date joined` AS
2     SELECT
3         EXTRACT(MONTH FROM `Date of Joining`) AS `MONTH`,
4         AVG(`Burn Rate`) AS `avg_br`
5     FROM
6         employee_burnout.table
7     GROUP BY `MONTH`
8     ORDER BY `MONTH`
9 ;
```

- Created View `Date Joined` and it extracts the month that the participant has joined their company and the avg burn rate in each month.

Results:

| | MONTH | avg_br |
|---|-------|----------------------|
| ▶ | 1 | 0.4504020421186979 |
| | 2 | 0.45335584064821055 |
| | 3 | 0.44936197094125085 |
| | 4 | 0.45213201320132007 |
| | 5 | 0.4542153047989629 |
| | 6 | 0.4609536601746133 |
| | 7 | 0.4493109987357775 |
| | 8 | 0.449300000000000025 |
| | 9 | 0.4558297078931022 |
| | 10 | 0.45147692307692405 |
| | 11 | 0.45354903268845775 |
| | 12 | 0.4499465954606134 |

- There isn't a grand difference between the months in terms of burn rate
- Highest burn rate: June (46% burn rate)
- Lowest burn rate: August (44.93% burn rate)

1.5 Find if there's a difference between company type

```
1 SELECT `Company Type`, AVG(`Burn Rate`) as `avg br`  
2 FROM employee_burnout.table  
3 GROUP BY `Company Type`  
4 ORDER BY `Company Type`  
5 LIMIT 2
```

- This selects the average burn rate of each company type (Service and Product)

| | Company Type | avg br |
|---|--------------|---------------------|
| ▶ | Product | 0.45083541147132183 |
| ▶ | Service | 0.45329226219812946 |

- Only .3% difference amongst the two
- Employees that work for service companies barely have a higher burn rate compared to employees that work for product companies

Conclusion

The employees that tend to have burnout are those who have a high amount of resources allocated to them. However, it depends on their position in the company as well. It's shown that employees with a high position in their company with a high amount of resource allocation does have high burn rates, but it's also shown that employees with a low position in their company with a high amount of resource allocation ALSO have high burn rates!!! Especially for those who don't have the option to work at home. Here's what I would recommend companies to avoid extreme mental fatigue and burnout:

- Reduce working hours (Especially if an employee is working greater than 40 hours a week)
- Have more breaks in working hours to reduce mental fatigue
- More companies (if possible) should consider a "work from home" option available. It can be a hybrid between on-site and remote setting (two days to work at home and 3 days to work on-site)
- Reduce the amount of resources allocated to an employee since it may be very overwhelming (especially for those who have low positions in their company)