Health Organization Product Analysis: Key Insights & Findings: Binil Mathew

Overview

I decided the best way to truly understand the company analytics/metrics is by visualizing it all to better understand trends, relationships, and patterns. Therefore, I made a Power BI Dashboard highlighting organizational metrics to better understand their financial stances, employee shift relationships, and overall statistics of company performance.

Key Findings

There are a lot of values that are invalid/have blank values. I decided to keep those in for the following reasons:

- Data Integrity Issues: By removing these values, and not replacing them with calculated values, it takes away from the integrity of our data and can lead to a bias in decision making/visualizing.
- Sample Size: Eliminating blank values affects statistical calculations by reducing the sample size. For example, when calculating averages, the total sum of a variable might remain the same but dividing it by a smaller count can impact the result and misrepresent the data.

1. Financial Performance Overview

- **Total Revenue:** $70.26M
- **Total Expense:** $53.88M
- **Profit:** $16.38M

Key Points:
This Healthcare organization operates with a 76.68% Expense to Revenue Ratio, showing that the organization is efficiently operating. Alternatively, there is a 23.32% profit margin.

2. Worker Pay, Charge Rates and Overall Shift Patterns

- **Average Pay Rate:** $24.16
- **Average Charge Rate:** $31.51

Key Points:

- There is an average difference of $7.35 between the charge and pay rates.
- A majority of workers take on a pay rate between the range of $20-$30, showing that this is a pay rate that interests most. This might be due to higher salaries being correlated to more experience, and a lot of the employees currently are on the lower side of experience.
- I highlighted the top 5 shift takers, who take 3,226 shifts out of the total sample. This is something that we should maybe incentivize. I would consider giving company points that can be redeemed for a prize for everyone who completes a series of shifts consistently.

3. No-Show Analysis

Key Points:

- **Highest No Shows:** October 2024 (78,101 no-shows)
- **Consistent High No-Show Months:** October through December
- This might be something linked to Q4. Maybe conduct a survey, or look into why a lot of workers decide to not show up during Q4 times
- We should better allocate resources to adjust for large number of no shows during the Q4 time period.

4. **Shift Time Preferences**

- **PM Shifts:** Most popular (114K shifts)
- **AM Shifts:** Second in popularity (97K shifts)
- **NOC (Overnight) Shifts:** Least popular (55K shifts)
- Maybe we should look into an incentive/raise salary for those who are willing to work overnight shifts. These numbers are much lower then the other two times.

5. Verified vs. Non-Verified Shifts

Key Points:

- **Verified Shifts:** 10.88%
- **Non-Verified Shifts:** 89.12%
- Maybe we should hold individuals accountable for not showing up to a shift, or cancelling within a time period where we cannot find someone to replace them.
- We should come up with some sort of prior notice/check in to ensure workers are going to show up for their shifts.

Final Thoughts & Recommendations

1. **Reduce No-Shows:** Focus on Q4 rates by implementing worker benefits/rewards programs and a check in process to ensure workers are able to show up to a shift in a timely manner. By doing this two days in advance, this gives us 48 hours to find someone to potentially replace the individuals unable to show.
2. **Optimize Pay Rates:** Promote shift times such as overnight by raising the pay rates. Because $25 dollars is our average middle point in terms of pay rates, this is a good starting point, and adjust the other shifts up/down depending on the amount of no shows we see.

Power BI Dashboard